Reporting Technical Reference

8.0 Customization

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Preface

Welcome to the *Customization* book of the *Reporting Technical Reference* series. This document introduces you to the concepts, terminology, and procedures that are relevant to reporting within a Genesys environment.

This guide is valid only for the Reporting 8.0 release(s).

Note: For versions of this document created for other releases of this product, visit the Genesys Technical Support website, or request the Documentation Library DVD, which you can order by e-mail from Genesys Order Management at orderman@genesyslab.com.

This preface provides an overview of this guide, identifies the primary audience, introduces document conventions, and lists related reference information. It contains the following sections:

- The Reporting Technical Reference Series, page 7
- Intended Audience, page 8
- Making Comments on This Document, page 8
- Contacting Genesys Technical Support, page 9

For information about related resources and about the conventions that are used in this document, see the supplementary material starting on page 134.

The Reporting Technical Reference Series

This *Customization* book is the fourth of five books in the *Reporting Technical Reference* series. The other books are the following:

- *Reporting Technical Reference 8.0 Overview*
- *Reporting Technical Reference 7.6 Report Generation Assistant*
- *Reporting Technical Reference 8.0 Solution Reporting Templates*
- *Reporting Technical Reference 7.6 Data Mart Conceptual Data Model*

Some components of Reporting (such as RG Assistant and Data Mart) are associated with the 7.6 release, while others (such as CCPulse+ and the

CCPulse+ reporting templates) are associated with 8.0—hence, the difference in the release numbers that appear in the titles.

This book introduces the points of customization in Historical Reporting and provides a series of detailed examples that illustrate how to customize each stage of the Data Collection, Data Mart, and Information Delivery Services.

In the "Historical Reporting" chapter of the *Overview* book of the *Reporting Technical Reference* series, you learned that Genesys Solution Reporting provides a sophisticated and flexible way for building reports about the performance of contact centers. In the *Solution Reporting Templates* book, you saw that Genesys Solution Reporting supplies several pre-made reports that are suitable for reporting on a wide range of contact-center activities for the various Genesys solutions. In this document, you will understand how these reports can be tailored and how new reports can be fashioned to meet specific business needs.

Intended Audience

This document, which is primarily intended for advanced contact-center and database administrators, assumes that you have a basic understanding of:

- Computer-telephony integration (CTI) concepts, processes, terminology, and applications.
- Network design and operation.
- Your own network configurations.
- CCPulse+ configuration and operation.
- CC Analyzer configuration and operation.

You should also be familiar with database technology and, for customization of CC Analyzer reports, the Oracle EPM System suite—specifically, Hyperion Interactive Reporting.

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Chapter

1 What Components Can You Customize?

You can customize more than just the CC Analyzer and CCPulse+ reports that are provided with Solution Reporting. The flexibility that is inherent in the Genesys Reporting Model enables you to design your own Hyperion metrics, create custom report layouts that are based on your own Data Sourcer layout templates, configure custom statistical parameters, and more.

This chapter provides an overview of the points of customization and includes the following sections:

- Points of Customization, page 11
- Overview of the Customization Exercises, page 12
- Customization Guidelines, page 15

Points of Customization

Figure 1 illustrates the Historical Solution Reporting Model and its points of customization. Many of these points—those that fall within the Data Collection and Data Mart Services—are customization points for CCPulse+ (the Real-Time Reporting tool) as well, especially where metrics have been associated or paired with an historical equivalent. Refer to the *Overview* book of the *Reporting Technical Reference* series for the composition of the Data Collection, Data Mart, and Information Delivery Services. Each of the chapters that follow focuses on one particular customization point and provides examples of how to achieve its end.

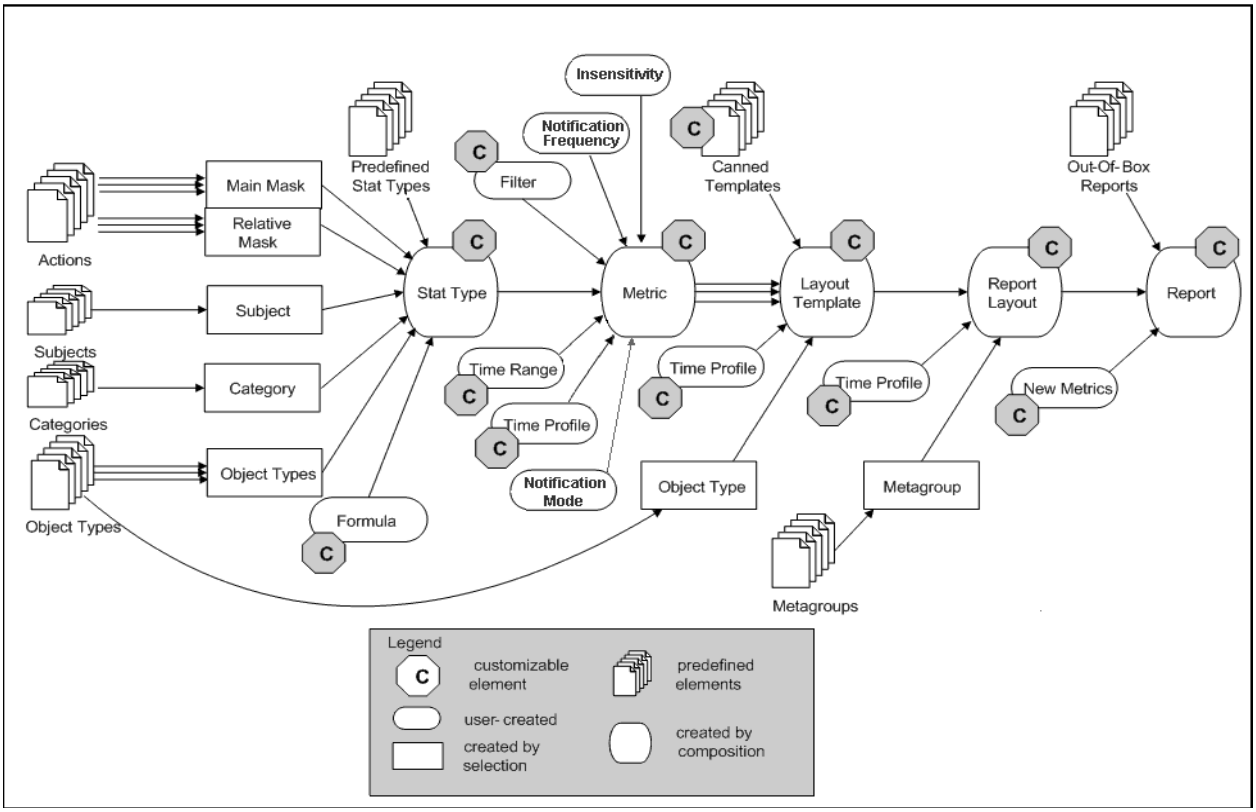


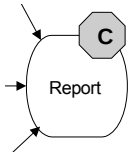
Figure 1: Points of Customization in the Genesys Historical Solution Reporting Model

Note: Source-timestamp functionality and media type (business attribute) is also part of a stat type's definition and is not reflected in Figure 1.

Overview of the Customization Exercises

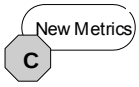
The four exercises in this document have been designed to illustrate practical contact center operations. They are independent of one another. Furthermore, they are not necessarily presented in the order in which you would customize elements in your environment. Instead, they are fashioned to illustrate fully one or more specific points of customization. More than one example may be provided within a chapter to drive home a particular point or to illustrate more than one method to reach the same end.

Exercise 1



The first exercise illustrates how to create a custom Hyperion report that references data that is stored in Data Mart. This exercise exemplifies the rightmost customization point in Figure 1. The exercise begins on page 17 in Chapter 2.

Exercise 2



The second exercise illustrates how to create a custom metric, `Service Level`, from existing Genesys-provided metrics (entirely by using Hyperion software) and how to add it to a Hyperion report that is based on the Enterprise Routing `Queue` report template. This customization is accomplished without modifying the corresponding `Queue` layout template or the report layout that is built from it. No new metrics are stored within Data Mart. See Chapter 3 on page 25.

`Note:` For a comparable exercise that illustrates report customization in CCPulse+, refer to the "Defining Statistical Views" section of the *Reporting 8.0 CCPulse+ Help* document.

Exercise 3

The third exercise illustrates several points of customization to create a report that summarizes the revenue that is generated by inbound calls that agents receive. In this exercise, we create a custom stat type, a custom formula, three custom filters, four custom statistics, a custom layout template, a custom report layout, and finally, a custom report.

The following is a description of the environment for this exercise:

- A contact center is working as a service provider in a multi-tenant environment; one of the tenants is Touch Point Communications, Inc.
- This tenant comprises of agents who are organized into four groups: Accounting, Receptionists, Sales, and Support.
- Agents from the Sales group process inbound calls and might generate revenue during the calls.
- The contact center application is designed as follows:
  - When an inbound call arrives at the contact center, an application determines the type of calling customer. It does so by extracting the customer number (from the `ANI` attribute) from the call and checking it against the customer database. If the customer exists in the database, the application determines the customer type by the dollar amount that is associated with the customer's account. Based on this dollar amount, customers are labeled either Platinum, Gold, or Regular. If the customer does not exist in the database, the type defaults to Regular. Customer type is manifested by attaching a `TKV` pair to the call (`"CS","`*`Value`*`"`). An example of such a `TKV` pair is (`"CS","Gold"`).
  - Next, Genesys Router routes the call to the desktop of an available agent who is most appropriate for the customer type.
  - The agent processes the call and tries to sell goods and/or services to the customer. In other words, the agent generates revenue during the call. The agent desktop application codes the amount of revenue that the agent generated as a `TKV` pair (`"Revenue","`*`Value`*`"`) attached to the

call. An example of a TKV pair is ("Revenue", 278.05), which means that the agent generated $278.05 during the call. The TKV pair, ("Revenue", 0) means that no revenue was generated.

The objective is to prepare a report that answers the following question:

> How much revenue did each of the three agents in the Sales group—Joseph Cotten, Cindy Crawford, and Jeanne Crain—generate for specified days, for each customer type, and for all customers?

To generate such a report, we shall use the schema that is shown in Figure 2. None of the Genesys-provided reports yields revenue-based results, so we must design both our own results and our own reports.

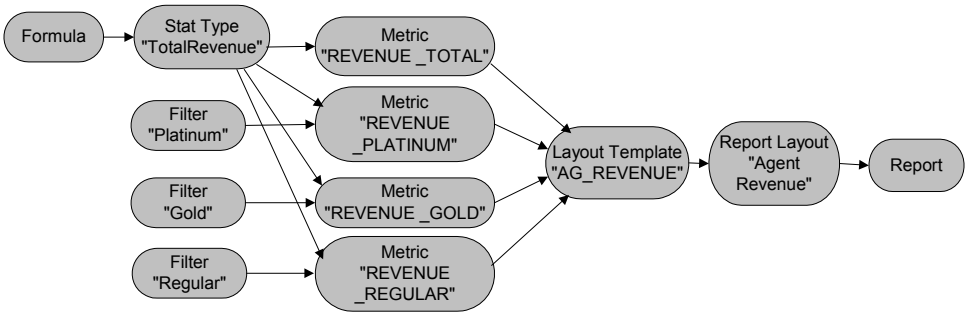
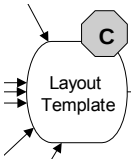
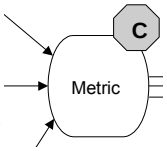
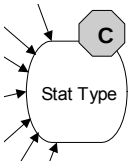


Figure 2: Schema for Generating an Agent Revenue Report

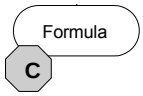


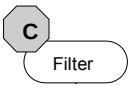
The cornerstone of this design is a new layout template, AG_REVENUE, which is described in Chapter 7. This template must contain four metrics; one for each of the three customer types, and a fourth to capture revenue for all customers. These metrics are named REVENUE_PLATINUM, REVENUE_GOLD, REVENUE_REGULAR, and REVENUE_TOTAL, respectively. Chapter 8 illustrates this customization point.



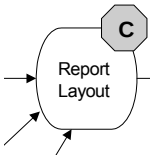


To create these custom metrics, we shall first create a new stat type—Total Revenue—that calculates total revenue. This is accomplished in Chapter 4. This custom stat type requires a custom formula to calculate sales revenue (see Chapter 5).

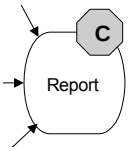




In addition, we shall create custom filters for each customer type: Platinum, Gold, and Regular—one for each metric. (Chapter 6 covers this customization example.) The REVENUE_TOTAL metric does not filter any calls and requires no custom filter.



The AG_REVENUE layout template is used to build the Agent Revenue report layout in DMA (see Chapter 9).



Finally, Chapter 10 illustrates the last customization point in Figure 1 by creating and running a custom report via Report Generation Assistant.

Exercise 4

The fourth exercise demonstrates real-time report creation for open media. The exercise illustrates how to create custom CCPulse+ templates and associate historical metrics to their real-time counterparts. Some points of customization

(filters, stat types, layout templates, and report layouts) are repeated to complete the exercise.

Customization Guidelines

Defining custom metrics correctly before any report that is based on them goes into the production environment is a critical task. Therefore, Genesys recommends that you first stage report customization in a lab by using Data Sourcer and Stat Server only. Create a report layout that is *not* based on any layout template, and use it to verify that values that are generated from using the new metric are correct. You can view the calculated values by using the Data Modeling Assistant (DMA). Then, create a layout template that is based on the verified statistical parameter definitions.

Fine-Tuning Configuration

If report values differ from those that you expected, fine-tune configuration by doing any of the following:

- Adjusting the `StatType` definition
- Applying a filter
- Revisiting the call flow

After you have reviewed and verified the metrics—a process that can take several days—create a layout template that contains all of the required metrics.

Bringing a New Layout Template into Production

To bring the new layout template into production:

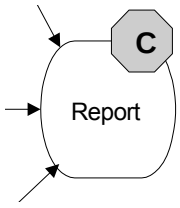
1. Export the template into an XML document.
2. Import the XML document into your production environment.

`Note:` When you use custom metrics, you might need to adjust your routing strategy to attach the data that is required by the new metric.

Chapter

2 Selecting Existing Data for a Custom Report

This chapter describes how to identify which Data Mart tables store desired data and how to use this information to design a custom Hyperion report that extracts this data. We construct this report from scratch—without building upon a Genesys-provided Solution Report or any other report that is described in this document.



This exercise illustrates the last customization point (the rightmost point that is depicted in Figure 1 on page 12) for Historical Reporting and uses CC Analyzer ETL Assistant and Hyperion Interactive Reporting Studio (HIRS) from the Oracle EPM 11.1.2 suite—the third-party software that powers CC Analyzer's Information Delivery Services. Refer also to the *Data Mart Conceptual Data Model* book of the *Reporting Technical Reference* series to learn about Data Mart structure or to the *Reporting 7.6 Physical Data Model for Data Mart* for your RDBMS for detailed table and column descriptions.

Notes: Hyperion offers a number of tools that you can use to create and edit reports. The examples in this chapter and throughout this book are not restricted to report creation/management via HIRS.

Some of the screenshots in this document capture actions using an older version of Hyperion software.

This chapter includes the following sections:

- A Typical Request, page 18
- Determining Which DM Tables House the Targeted Data, page 18
- Creating a Custom Hyperion Report, page 20

This chapter does not apply to Real-Time Reporting.

A Typical Request

The task for this exercise is to extract the following information from Data Mart by using Hyperion Interactive Reporting Studio:

- The total number of inbound calls that are received and their duration
- For any given day
- By three named agents: Don Adam, Dave Clark, and Kate Jackson.

For this task, we begin with ETL Assistant—we want to find out which Data Mart tables store the desired information. Then, move to the Hyperion suite to build a custom report that extracts data from those tables. (Hyperion offers other tools that can accomplish the same end.)

Note: When you are designing custom reports, make sure that a solution for your problem statement is attainable within the realm of Historical Reporting—that it does not demand results for incompatible report elements, such as between objects that have no hierarchal relationships (queues and agent groups), metrics that do not apply to an object (abandoned-in-queue metrics for agents), and time boundaries (what occurred 30 minutes ago, when Historical Reporting is not optimized for Reporting inside the standard two-day window). Otherwise, your report will yield no results or results that are difficult to interpret.

Determining Which DM Tables House the Targeted Data

The Data Mart stores a hefty quantity of data for different contact-center objects and seven levels of aggregation. Designing a report that generates data about a specific agent for a specific day requires that you, as the report's designer, know how to pinpoint this information from all other data that is stored in the Data Mart.

To find out the names of the Data Mart tables that contain the targeted data for this example:

1. Open ETL Assistant, and specify the appropriate connectivity parameters and RDBMS type for your Data Mart.

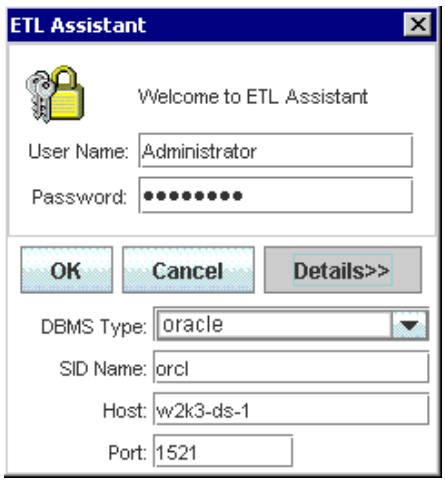


Figure 3: Logging in to ETL Assistant

   The ETL Assistant interface appears.

2. From the `Report View` tab, open the appropriate object report folder.

   For this example, we choose the `Agent` folder because we are interested in obtaining the results of `Agent` contact-center objects. Inside this folder are report subfolders for each aggregation level, beginning with the minute level—`Agent MINUTE Level`. This level, incidentally, reflects data exactly as it is transferred from ODS with no further grouping. The default ODS schedule collects data in 15-minute chunks—understand that the `MINUTE` report folders do not store minute-by-minute details.

3. Drill down to the subfolder that stores the data for the desired aggregation level.

   This problem statement requests data for one select day; so, we stop drilling when we reach the `Agent DAY Level` report folder (shown in Figure 4). This folder stores day-level summary results that will be reported on the Summary pages of our custom report.

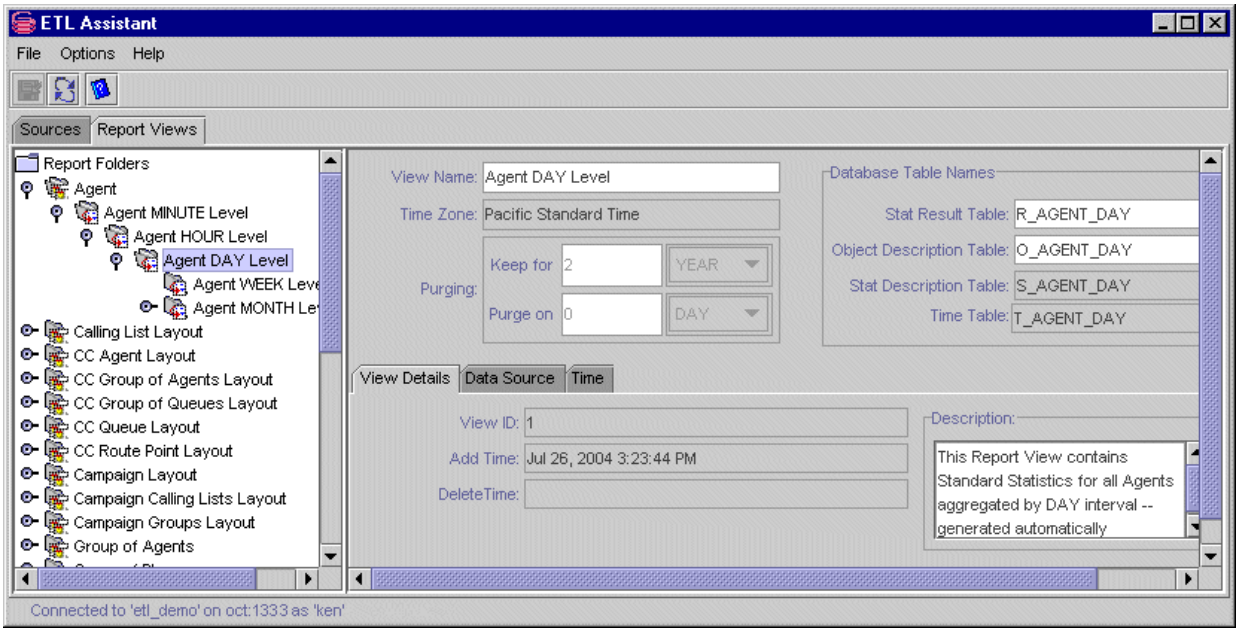


Figure 4: Finding Table Names in the Data Mart

In the upper-right corner of Figure 4, notice that the names of the tables that we seek appear in the `Database Table Names` frame of the main window. (These are actually aliases to the Data Mart tables.) The names are `R_AGENT_DAY`, `O_AGENT_DAY`, and `T_AGENT_DAY`. (Hyperion report templates do not reference stat description tables.) These tables store results (total number/duration of inbound calls), objects (the three agents), and date-related data respectively. Note these table names, for future use.

Creating a Custom Hyperion Report

Now, open Hyperion Interactive Reporting Studio and specify the correct `.oce` file to connect to Data Mart. (Report Generation Assistant describes how to set up this connection file.) We are going to build the underlying query for our custom report:

1. With the `Query` section selected, load the `R_AGENT_DAY`, `O_AGENT_DAY`, and `T_AGENT_DAY` tables from the `Elements` window (bottom left-hand corner) by double-clicking their names.

   HIRS loads the tables into the main frame, as shown in Figure 5.

   Note: On Oracle RDBMSs, HIRS loads tables from *all* databases. Be sure to select the tables that belong to your specific database. You can view a table's full name by right-clicking its name in the `Elements` window and selecting `Full Names`.

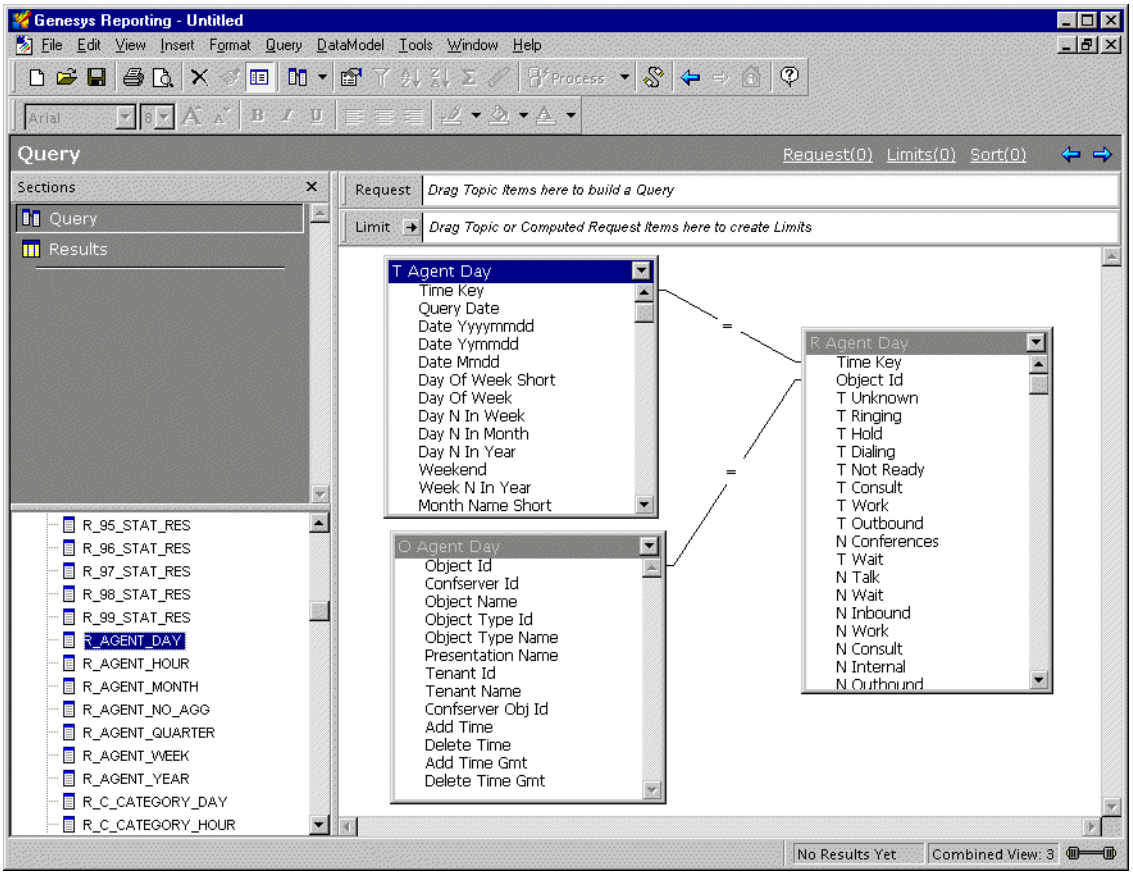


Figure 5: Loading Tables from the Data Mart

2. Drag the following columns from the respective tables, and place them in the `Request` field:
   - `Date Yyyymmdd` (from the `T_AGENT_DAY` table)
   - `Presentation Name` (from the `O_AGENT_DAY` table)
   - `N Inbound` and `T Inbound` (from the `R_AGENT_DAY` table) into the `Request` line. (`N Inbound` stores the number of inbound calls; `T Inbound` stores their duration.)

   Figure 6 illustrates the `Request` field, given these selections.

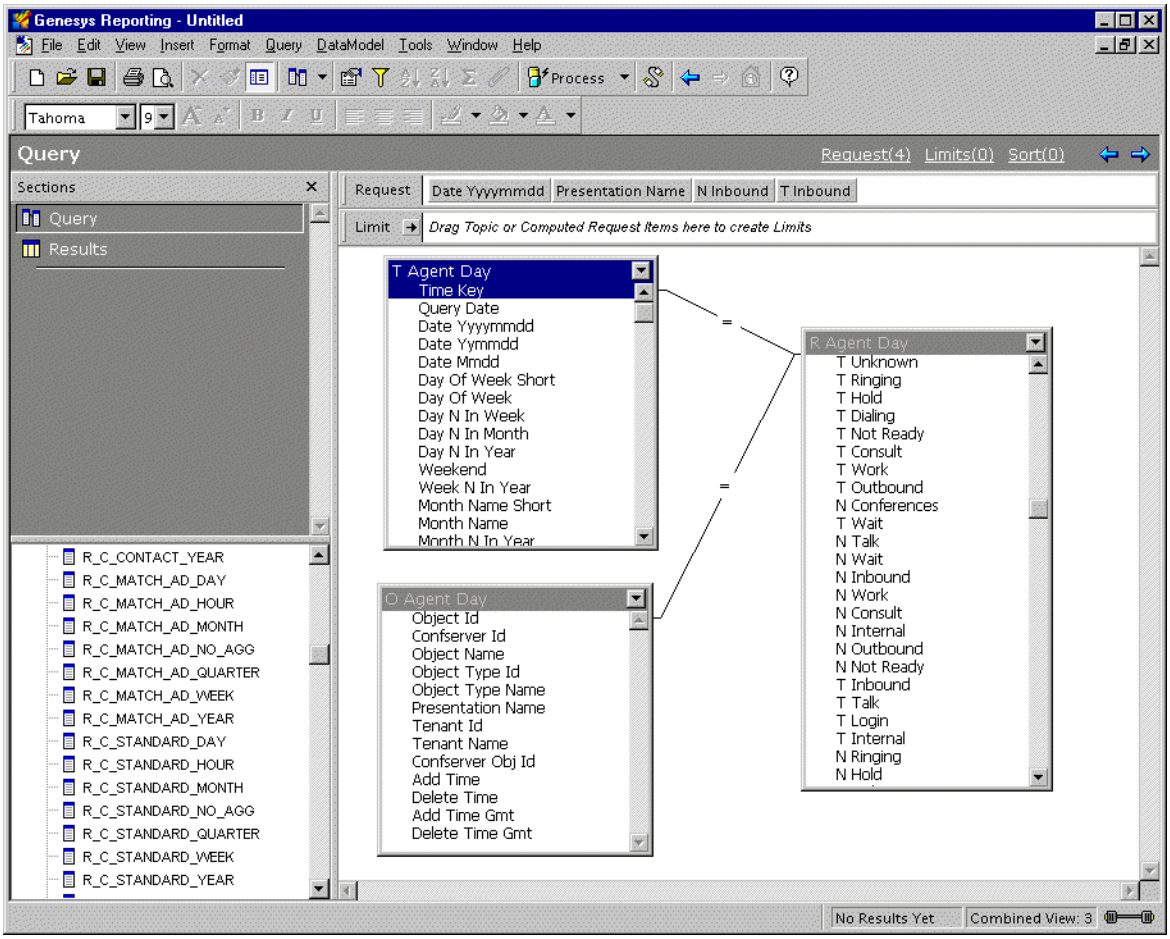


Figure 6: Creating a Request

3. In the `Filter` field, specify the actual values that are requested by the problem statement. (Recall that it requested both day-level data and data for three agents: Don Adam, Dave Clark, and Kate Jackson). Figure 7 shows the completed `Filter` field for this example.
   a. From the `T_AGENT_DAY` and `O_AGENT_DAY` tables, drag the `Date Yyyymmdd` and `Presentation Name` fields respectfully to the `Filter` field.
   b. Assign a variable limit to `Date Yyyymmdd`—we are designing this report such that the date will be supplied during report generation.
   c. Set the `Presentation Name` by entering the names of the three agents in the `Filter` field.
   d. From the menu bar, click the `Process` button.
   e. Check the results.

Figure 8 demonstrates some possible results upon testing and running the query.

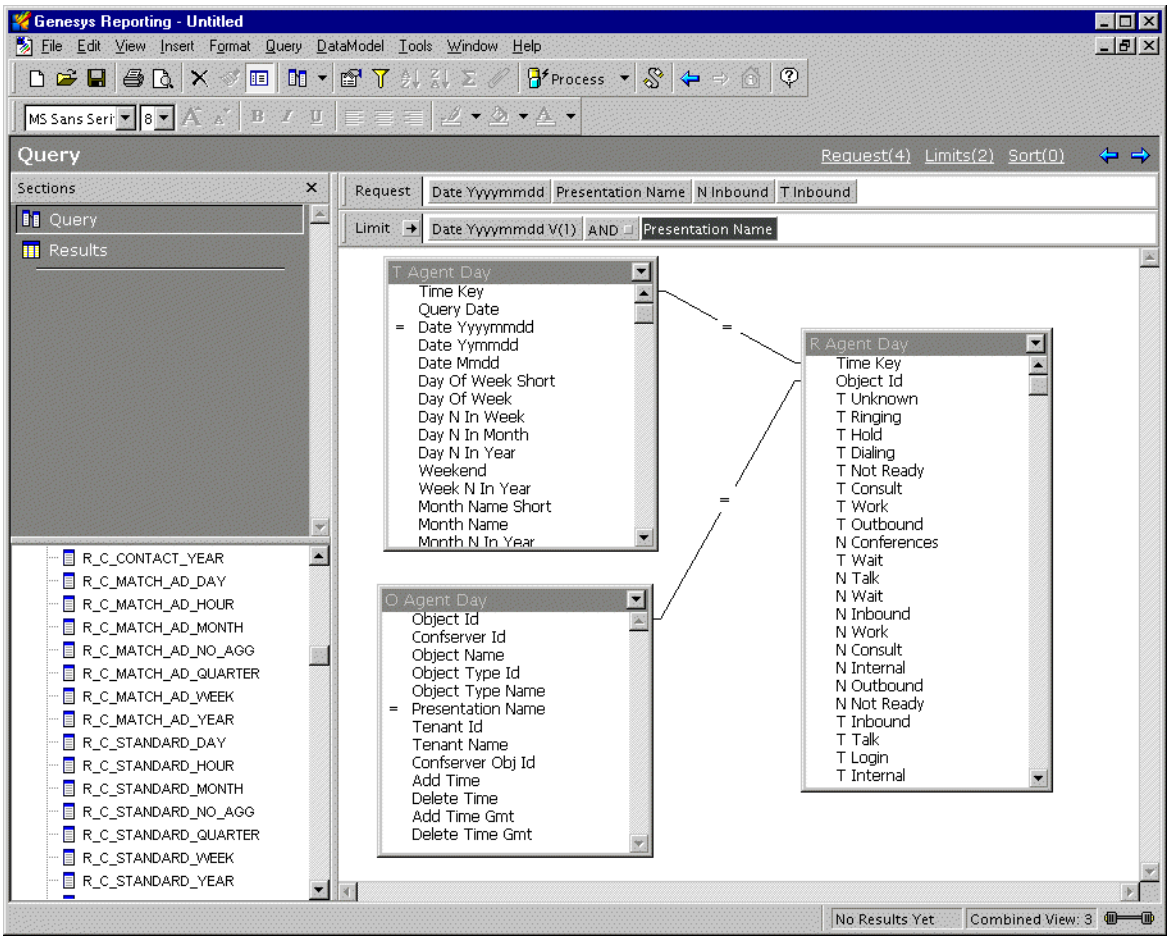


Figure 7: Specifying Limits

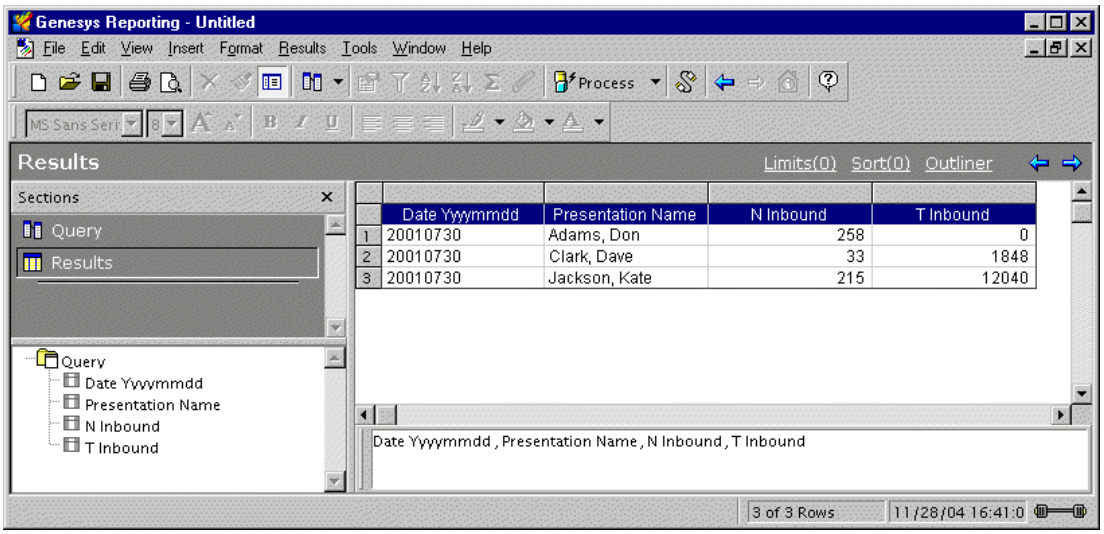


Figure 8: Results in Tabular Format

4. Lastly, build a chart view of the result and save the report.

   Figure 9 charts the tabular results, which are shown in Figure 8, in 3-D column format.

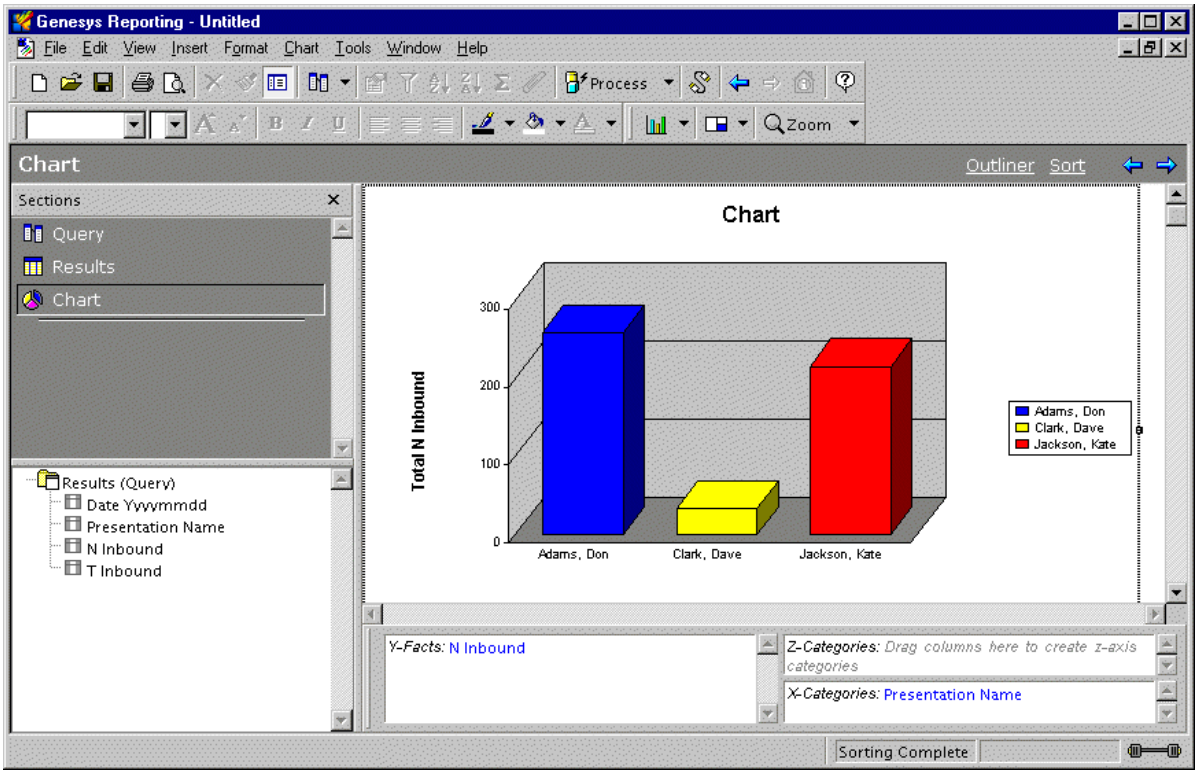
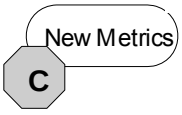


Figure 9: Chart Section

Using this technique, you can extract historical data—using very simple SQL queries—from the Data Mart by using any RDBMS-enabled tool. Copy the Hyperion-generated query into your database tool.

Chapter

3 Adding Custom Metrics to a CC Analyzer Report



This chapter illustrates the next-to-last customization point of the Historical Solution Reporting Model (shown in Figure 1 on page 12) by describing how to add a custom metric to an existing CC Analyzer report. Throughout this exercise, we use Hyperion Interactive Reporting Studio (HIRS)—one tool in the Hyperion suite that powers CC Analyzer's Information Delivery Services.

This chapter includes the following sections:

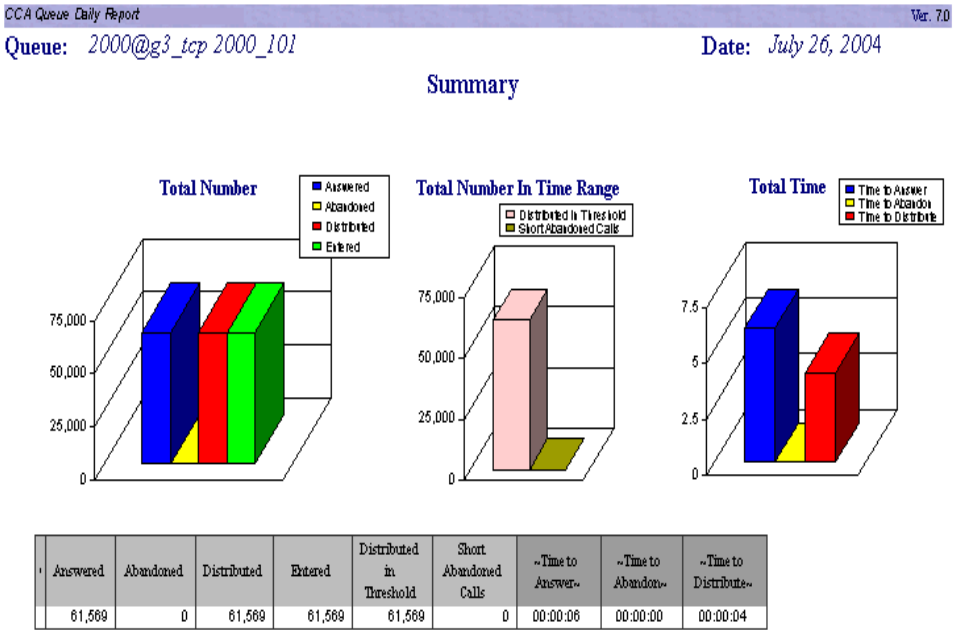
- The Unaltered Queue Report, page 25
- Our Custom Metric: Service Level, page 26
- Creating a Computed Item, page 27
- Adding Service Level to the Report's Summary Section, page 29
- Adding Service Level to the Report's Detail Section, page 29
- Adding Service Level in Chart Format, page 31

Note: The screen shots in this chapter were captured from an older version of Hyperion.

The Unaltered Queue Report

Begin this exercise from a report that is based on the `Queue` report template. (The *Report Generation Assistant* book of the *Reporting Technical Reference* series describes how to create reports from the Genesys-provided report templates.) The Reporting Template CD provides the `Queue` report template for the Enterprise Routing and Outbound Contact solutions (refer to the "CC Analyzer Report Templates" chapter of the *Solution Reporting Templates* book).

Figure 10 shows a cutaway from one summary page of a sample queue report that reveals statistical values for the `2000@g3_tcp2000_101 Queue` object that derive directly from this template's metrics. The values are depicted in both tabular and chart formats, by design.



Answered	Abandoned	Distributed	Entered	Distributed in Threshold	Short Abandoned Calls	~Time to Answer~	~Time to Abandon~	~Time to Distribute~
61,569	0	61,569	61,569	61,569	0	00:00:06	00:00:00	00:00:04

Figure 10: A Sample Queue Report

Our Custom Metric: Service Level

Suppose that we want to add service level metrics to this report to convey the percentage of calls that were successfully distributed within a preset number of seconds from any named queue to all calls that entered and left the queue. The service-level definition that we want to use is the following:

$$\frac{100 \times TotalNumCallsDistributedInThresholdWithinPeriod}{TotalNumCallsThatLeftQueueWithinPeriod}$$

(There are other definitions of service level in use throughout the industry.)

Note that the denominator—the total number of calls that left the queue within the reporting period—is equivalent to the sum of two total-number metrics that exist within the report; namely: `Distributed` and `Abandoned`. (In this report, `Abandoned` signifies that the customer released the call before it could be distributed from the queue.) Also, the variable in the numerator is equivalent to this report's `Distributed_in_Threshold` measure.

The formula for calculating this statistic could be rewritten as follows:

$$\frac{100 \times DistributedInThreshold}{Distributed + Abandoned}$$

Because the Data Mart already stores all of the components that are required to calculate this variation of service level, we do not need to interrupt the Data Collection or Data Mart Services in order to compute its values. Instead, we shall create a custom measure directly within our sample `Queue` report by using HIRS and we shall edit this report to display service-level results within the summary and detailed pages.

Creating a Computed Item

To add a custom metric (or "computed item" as it is termed within Hyperion software) to our sample report:

1. Start Hyperion Interactive Reporting Studio, and open the sample queue report.
2. Open the `Summary Level Results` section of the report by selecting the appropriate command from the menu on the left-hand side of the main window (shown in Figure 11).

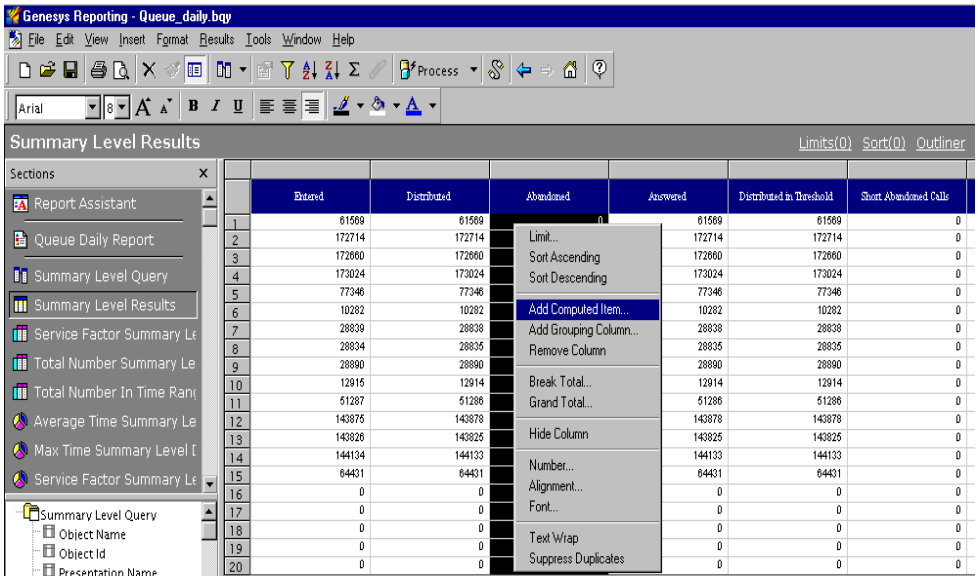


Figure 11: Existing Summary-Level Results

3. Right-click within the main window and, from the context menu, select `Add Computed Item`.

   The `Computed Item` dialog box, which is shown in Figure 12, opens.
4. Enter the formula for calculating service level.
   a. In the `Name` field, type `Service Level`.
   b. In the `Definition` window, type the metric's formula.
   c. Click `OK`.

   Figure 12 shows these specifications.

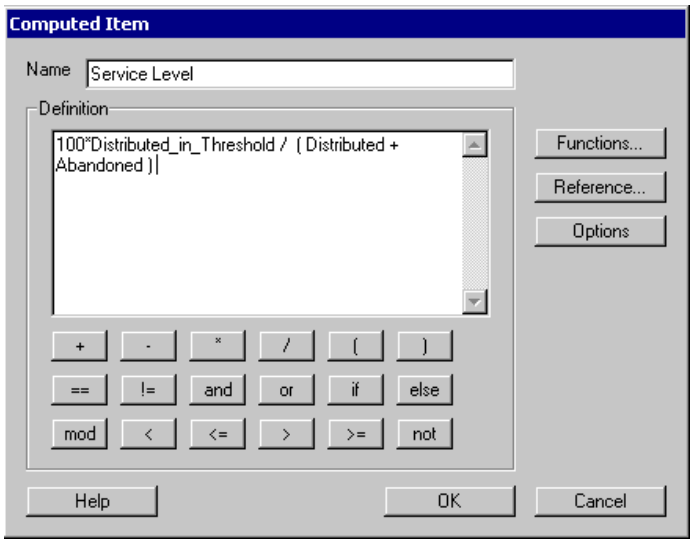


Figure 12: Building a New Formula

The `Summary Level` window (a portion of which is shown in Figure 13) now includes the `Service Level` column in the main window that calculates service-level values for each record from the values of three other columns. These values are calculated by Hyperion "on the fly" and are not stored in the Data Mart.

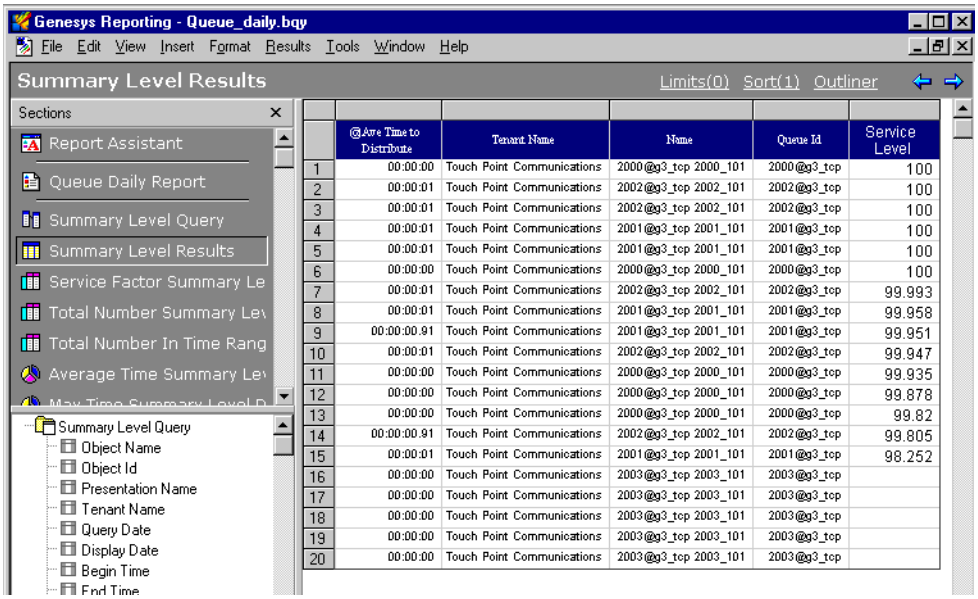


Figure 13: New Column "Service Level" Appears

Adding Service Level to the Report's Summary Section

To add the `Service Level` column to the table portion of the report, switch on the `View->Section/Catalog` option, drag `Service Level` from the `Summary-Level Result` in the lower left-hand corner of the main window and drop it in the `Table Facts` window. Figure 14 illustrates the results of this operation.

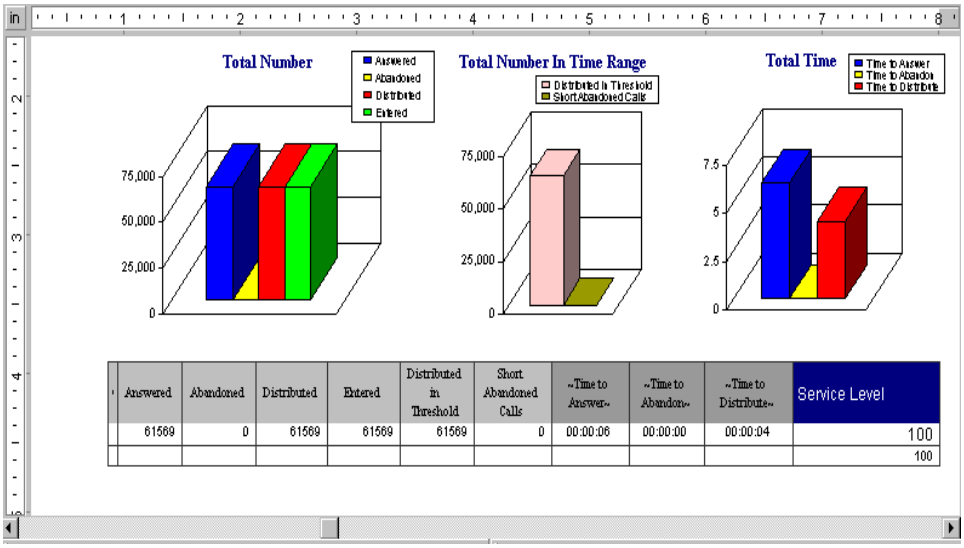


Figure 14: Adding Service Level to the Report Summary

Adding Service Level to the Report's Detail Section

Next, we shall create another custom metric and add it to the `Details Level` view of the report.

1. In the main window, open the `Details-Level Results` section.
2. Repeat Steps 3 and 4 on page 27 to add a computed item to this level.

The detail section of this report now contains an additional column that computes service levels for each record that are based on the values of three other database fields (see Figure 15).

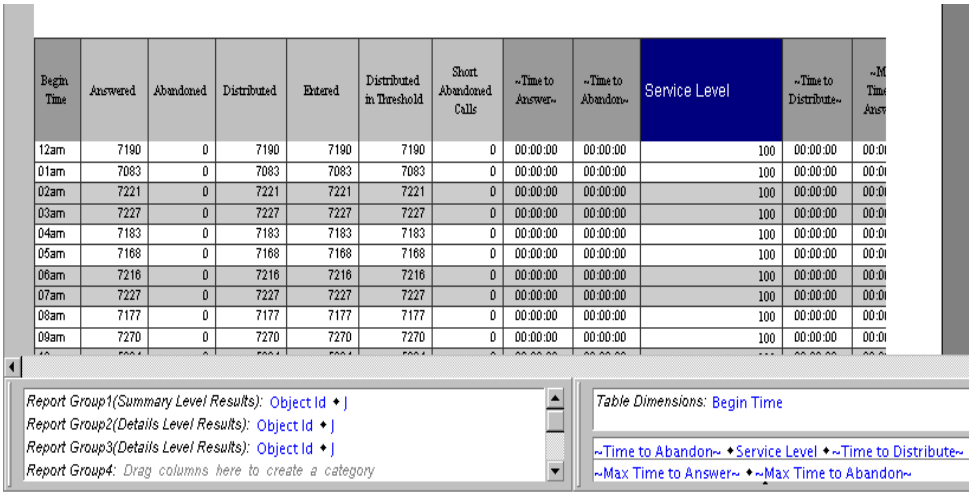


Figure 15: Inserting Service-Level Metric into the Details-Level Table

3. Drag `Service Level` from the `Detail-Level Query` list in the lower left-hand corner of the main window and drop it in to the `Table Facts` window.

The "CC Analyzer Report Templates" chapter of the *Solution Reporting Templates* book of the *Reporting Technical Reference* series describes the various sections of CC Analyzer reports.

Adding Service Level in Chart Format

To add a graph to the sample report that depicts service level:

1. Build a chart for the data, as shown in Figure 16.

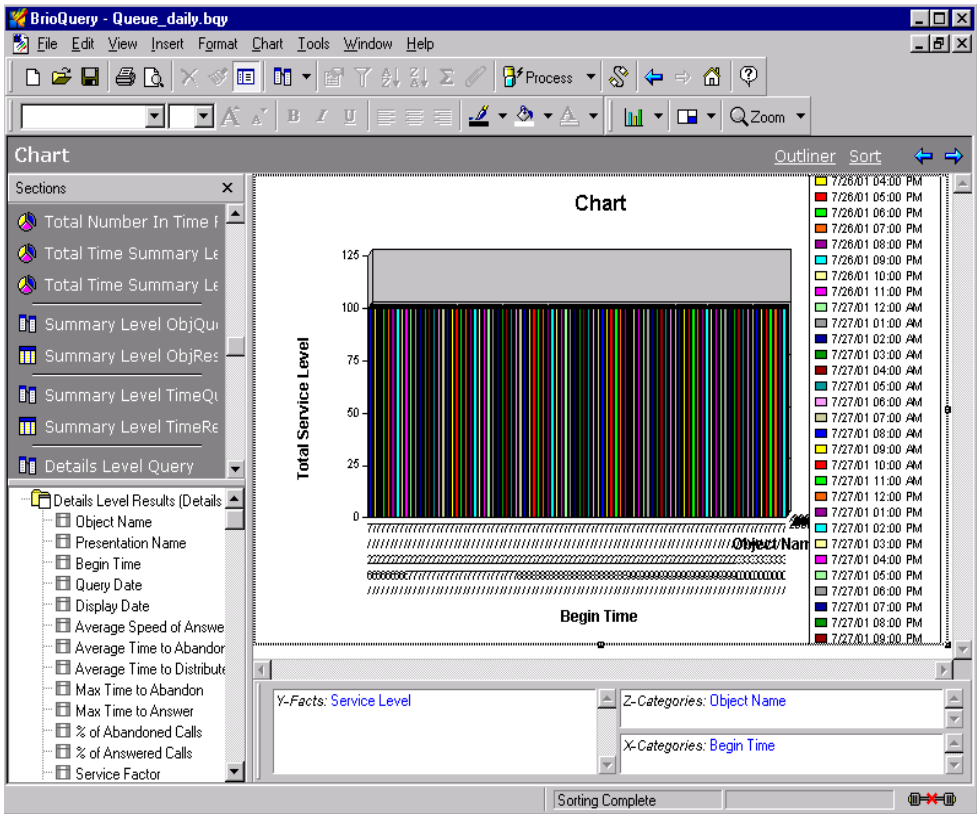
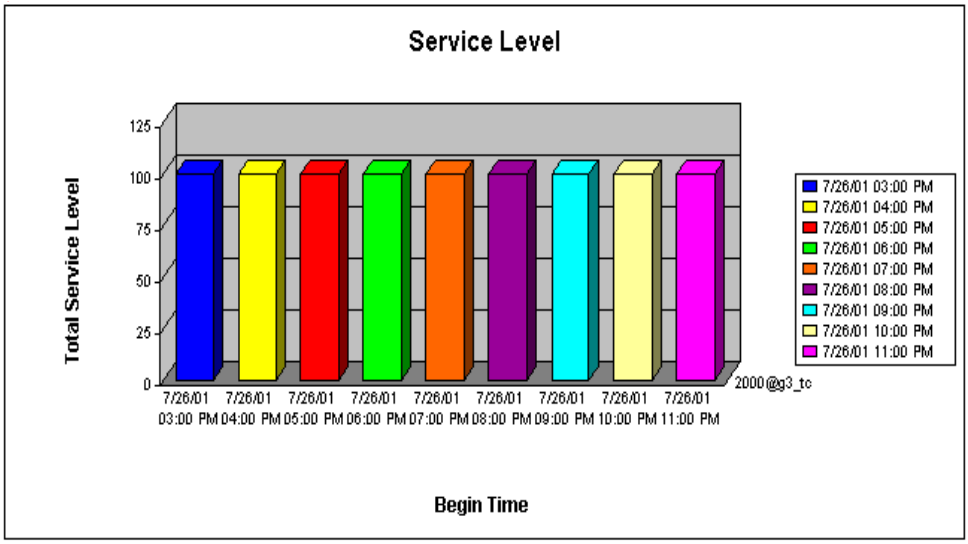


Figure 16: Creating an Hour Diagram

2. From the `Details Level Query`, drag the chart into the report and `Service Level` to the report table (see Figure 17).



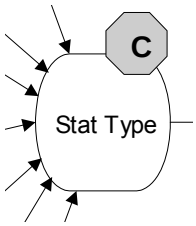
Begin Time	@Ave Speed of Answer	@Ave Time to Abandon	@Ave Time to Distribute	Service Factor	%of Answered Calls	Service Level	%of Abandoned Calls
03pm	00:00:00	00:00:00	00:00:00	100.00	100.00	100	0
04pm	00:00:00	00:00:00	00:00:00	100.00	100.00	100	0

Figure 17: Inserting Diagram into the Report

Notice that the new metric has been added and that the corresponding statistical data has been calculated and presented in both tabular and chart formats in the report. All of this customization was achieved within the Information Delivery stage exclusively, by using CC Analyzer, and without interacting with the RDBMS.

Chapter

4 Creating Custom Stat Types



This chapter illustrates the second customization point of the Historical Solution Reporting Model that is shown in Figure 1 on page 12: stat type creation. Genesys provides about 300 predefined stat types that are used to structure data collection for the Genesys-provided solution reports, but you can customize these stat types or build your own to have Data Sourcer collect different data. The *Solution Reporting Templates* book of the *Reporting Technical Reference* series describes these and other components of the Genesys-provided reports.

For this exercise, we use Data Modeling Assistant (DMA) as the user-interface tool. Incidentally, you can also configure stat types directly within the Stat Server application in Configuration Manager; however, for reasons that are described in the Appendix, this chapter focuses on using the `Stat Type Constructor` dialog box with DMA to accomplish the task. Data Sourcer, connected to a Stat Server application, plays a role in the background to write configuration changes to ODS and Configuration Server.

This chapter includes the following sections:

- Our Custom Stat Type: TotalRevenue, page 34
- Defining a Custom Stat Type by Using DMA, page 34
- Defining Stat Types by Using Configuration Manager, page 37

The example that is used for this chapter through Chapter 9 customizes Historical Reporting components at the Data Collection and Data Mart stages. The end result that is illustrated in this exercise calculates the revenue that agents generate. With these customizations, you can display data by using any report creation tool, including CCPulse+ and Hyperion Interactive Reporting (CC Analyzer).

`Note:` For information on generating and customizing historical views in CCPulse+, refer to the *Reporting 8.0 CCPulse+ Help*.

Our Custom Stat Type: TotalRevenue

The problem statement of the Agent Revenue exercise, which is described on page 13, questions *how much revenue was generated.* Although revenue is core to nearly every business, revenue is not an industry-wide metric that is inherent in switches, telephony servers, routers, and so on. In contact center terms, revenue is considered to be user data; it must be custom-configured within your environment in order to be captured and affiliated with interactions. This T-Server configuration is beyond the scope of this exercise—we begin with an environment that already captures revenue by using the key-value pair ("Revenue","*Value*") that is attached to calls that agents handle. Our custom stat type will calculate the statistic's total value when inbound calls are handled by any contact center object at which an agent might be stationed. We name this stat type TotalRevenue.

Defining a Custom Stat Type by Using DMA

To create the TotalRevenue stat type:

1. Open DMA and select your Data Sourcer application.
2. In the Statistical Parameters section, click Statistical Types to display the stat types that are defined to ODS.
3. Right-click in the stat types folder list, and select New from the context menu that appears. The StatType Constructor dialog box opens.
4. Define this new stat type, as shown in Figure 18.
   a. In the Name field, type TotalRevenue.
   b. In the Category list box, select TotalCustomValue—we want to calculate a sum of the custom user-data values.
   c. In the Formula field, invoke the Custom Formula Constructor dialog box to define a custom formula. (This touches upon another point of customization in the Historical Solution Reporting Model. Follow the steps described in Chapter 5, beginning on page 39.)
   d. In the Subject list box, select DNAction. A statistic that is based on this stat type will be triggered from the actions that occur at directory numbers.
   e. In the Objects frame, select Agent from the list box, and mark all objects in the RegDN compatibility group.

   Tip: Even though we are interested only in the Agent object, selecting all RegDN-compatible objects will make this stat type reusable and applicable for other Solution Reporting applications, such as CCPulse+.

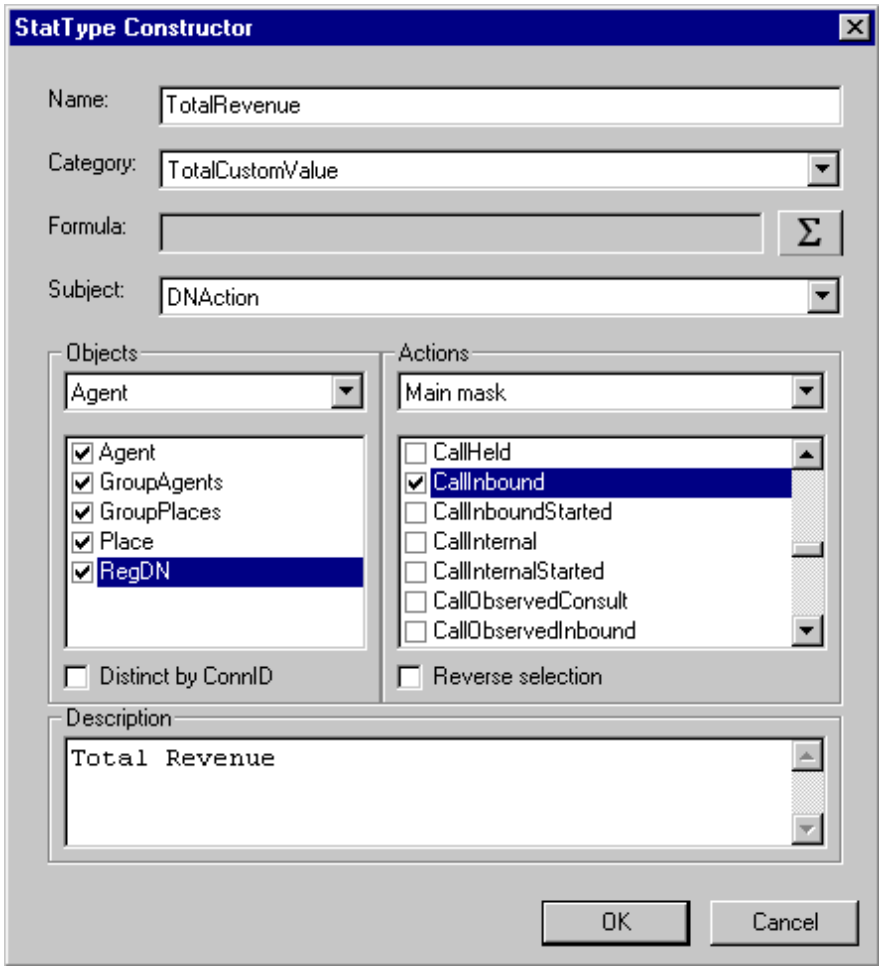


Figure 18: Creating a New Stat Type

f. In the `Actions` frame, select `CallInbound` and `HandlingInbound` as the main masks for this stat type. Both are durable actions; we want to calculate total revenue that pertains to all inbound interactions.

g. In the `Description` frame, type an appropriate description.

5. Click `OK` to save the stat type.

6. DMA requests confirmation of this configuration change (see Figure 19); click `Yes`.

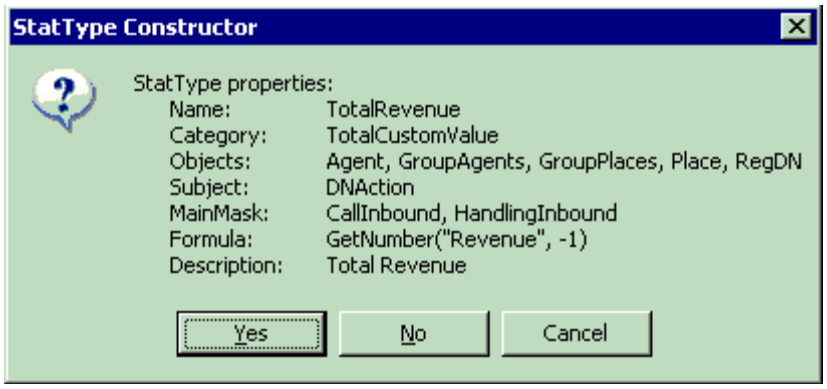


Figure 19: New Statistical Type

Note that we did not mark the `Distinct by ConnID` check box in the `Objects` frame (Figure 18). Keeping this box cleared ensures that the value from the `Revenue TKV` pair is collected for each `CallInbound` durable action. Several `CallInbound` durable actions can occur during one inbound call, so the formula extracts the revenue value several times during the call. This is the desired behavior. As you know, the revenue value is generated at the end of the call; therefore, the first occurrence of each `CallInbound` action yields a zero value; and only the last occurrence may yield a nonzero value. If you distinguish `CallInbound` actions by ID, only the first occurrence of a `CallInbound` action is considered, which would yield an incorrect result.

Figure 20 shows the bottom portion of the DMA interface, in which the new `TotalRevenue` stat type now appears.

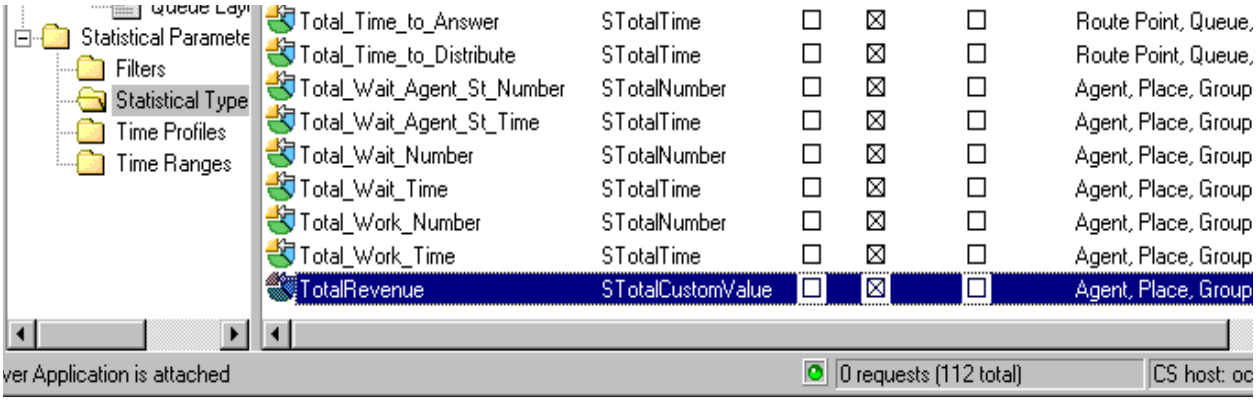


Figure 20: New Stat Type Added

Defining Stat Types by Using Configuration Manager

You can also define stat types within the Stat Server application object by using Configuration Manager. Figure 21 shows the definition of the `TotalRevenue` stat type which appears as a section under `Options` tab in Stat Server application. For the reasons that are stated in the Appendix, however, the preferred method of stat type creation is by using DMA.

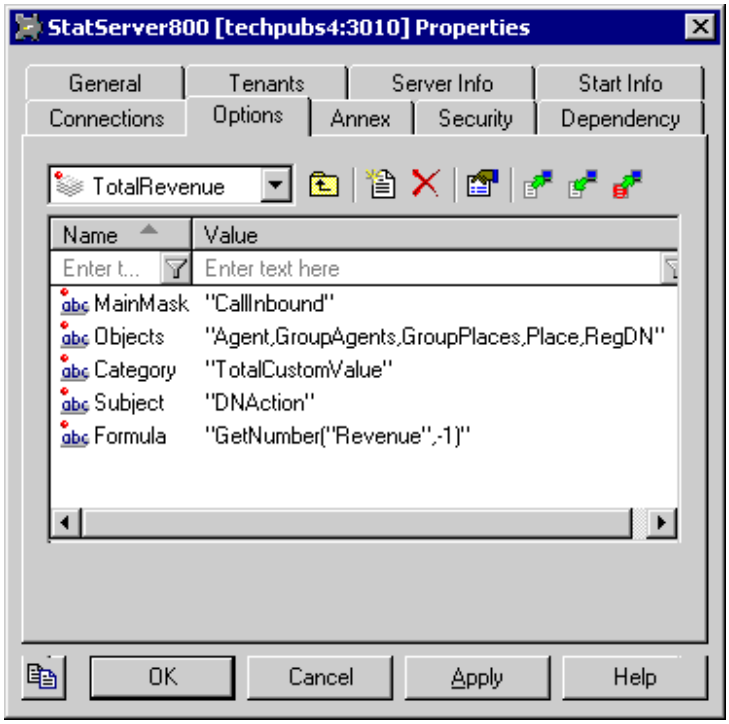
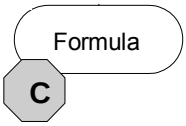


Figure 21: The TotalRevenue Stat Type in Configuration Manager

Chapter

5 Creating Custom Formulas



This chapter illustrates how to create a custom formula by using the Agent Revenue exercise, which is described on page 13, as a backdrop. Formulas are one attribute of a stat type that enable computations on business-related data that is attached to TEvents. In this exercise, the revenue that is generated by an inbound call is captured and attached to the `EventEstablished` TEvent. (How attached data is configured is beyond the scope of this exercise.) The issuance of this TEvent, along with a call-type attribute of `Inbound`, triggers the Stat Server `CallInbound` durable action. Our task is to define a custom formula for the `TotalRevenue` stat type that was created in Chapter 4.

This chapter includes the following sections:

- Our Custom Formula: Last Revenue Generated, page 39
- Defining Custom Formulas to Stat Types by Using DMA, page 40
- Defining Custom Formulas to Stat Types by Using Configuration Manager, page 43

You can assign formulas to stat types by using Configuration Manager. For the reasons that are stated in the Appendix, however, the bulk of this chapter illustrates custom formula creation by using Data Modeling Assistant (DMA).

Our Custom Formula: Last Revenue Generated

This example will retrieve the last revenue value that was affiliated with a call. In Stat Server terminology, the n^{th} occurrence of a value for a particular key can be retrieved from user data by specifying an index in the custom formula—for example, `GetNumber("Revenue",-1)`. The constant `-1` is reserved to retrieve the last value. Refer to the "UserData Properties" table in the *Framework 8.0 Stat Server User's Guide* for a detailed discussion about the functions that you can use to extract user-data values.

In theory, however, revenue might be generated several times during the same call (for example, by different agents). The `TKV List` can have several pairs that use the same key. In this case, the formula could be defined using a summation function, `GetSum("Revenue"),` to sum up all such revenues.

Defining Custom Formulas to Stat Types by Using DMA

1. Open DMA, and select the same Data Sourcer application that was used to create the `TotalRevenue` stat type in Chapter 4.
2. In the `Statistical Parameters` section, click `Statistical Types` to display the stat types that are defined to ODS.
3. Double-click the `TotalRevenue` stat type to open the `StatType Constructor` dialog box and display its properties.

   Figure 18 on page 35 shows how this stat type was defined.
4. Click the `Summation` button Σ in the `StatType Constructor` dialog box to open the `Custom Formula Constructor` dialog box, which is shown in Figure 22.

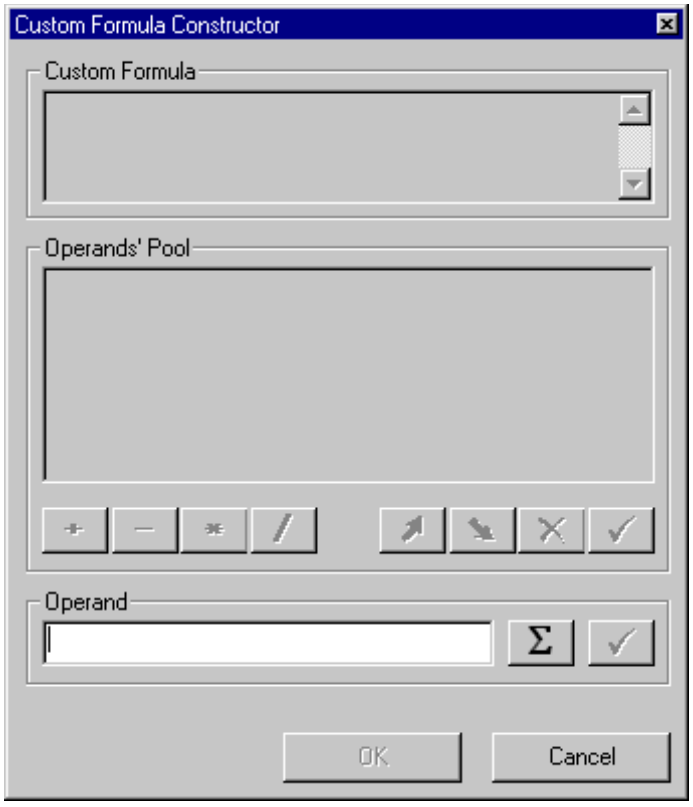


Figure 22: Custom Formula Constructor Dialog Box

We construct custom formulas as a composition of their atomic operands. We define the atomic operands in the `Operand` field (at the bottom of the dialog box), propagate them to `Operands' Pool` (in the middle), and then move the resulting formula to the `Custom Formula` frame (at the top). Fortunately, our custom formula is simple, consisting of only one atomic operand. It extracts the revenue value from the key-value (TKV) pair `("Revenue","Value")` of the `CallInbound` durable action. This value represents the revenue that was generated during this action.

5. To create the atomic formula, click the `Summation` button.

   The `Compound Operand` dialog box, which is shown in Figure 23, overlays the `Custom Formula Constructor` dialog box (only a portion of which is shown in the figure).

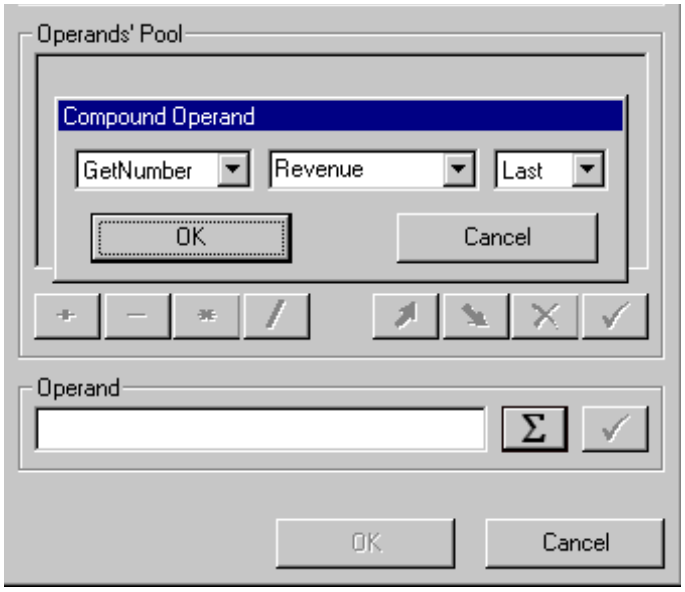


Figure 23: Creating a Custom Formula

   a. In the first list box in the `Compound Operand` dialog box, select the `GetNumber` binary function.
   b. In the second list box, which corresponds to the first operand of the function, type `Revenue`, which is the name of the TKV key.
   c. In the third list box, select `Last`. If more than one revenue value was affiliated with the call, the `Last` function returns the last affiliated value.
   d. Click `OK` to close the `Compound Operand` dialog box and move the atomic formula to the `Operands' Pool`.

6. Click the check-mark button that appears just below the `Operands' Pool` to move the formula to the `Custom Formula` frame.

   Figure 24 shows the completed custom formula.

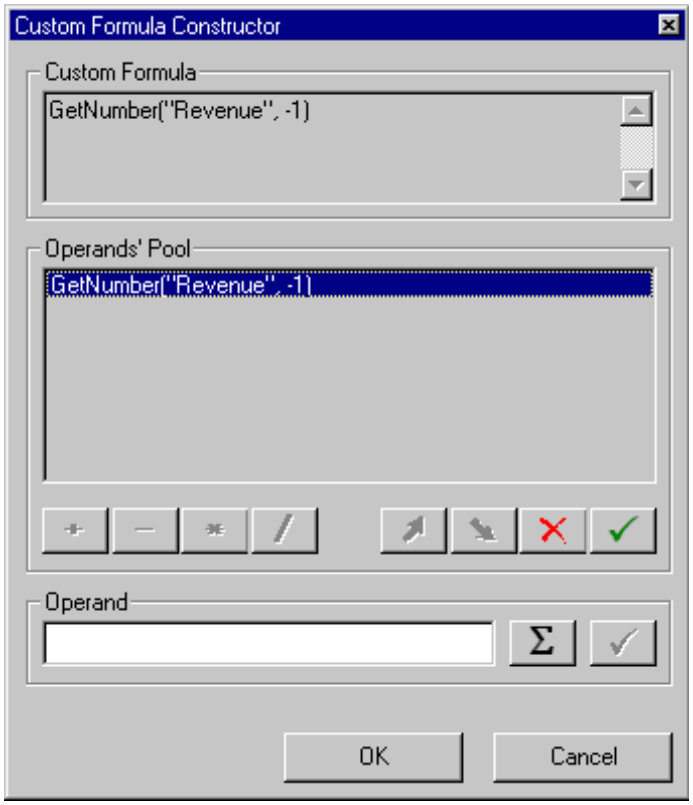


Figure 24: Finishing the Custom Formula

7. Click `OK` to return to the `StatType Constructor` dialog box, the top half of which is shown in Figure 25. Your custom formula appears in the `Formula` box.

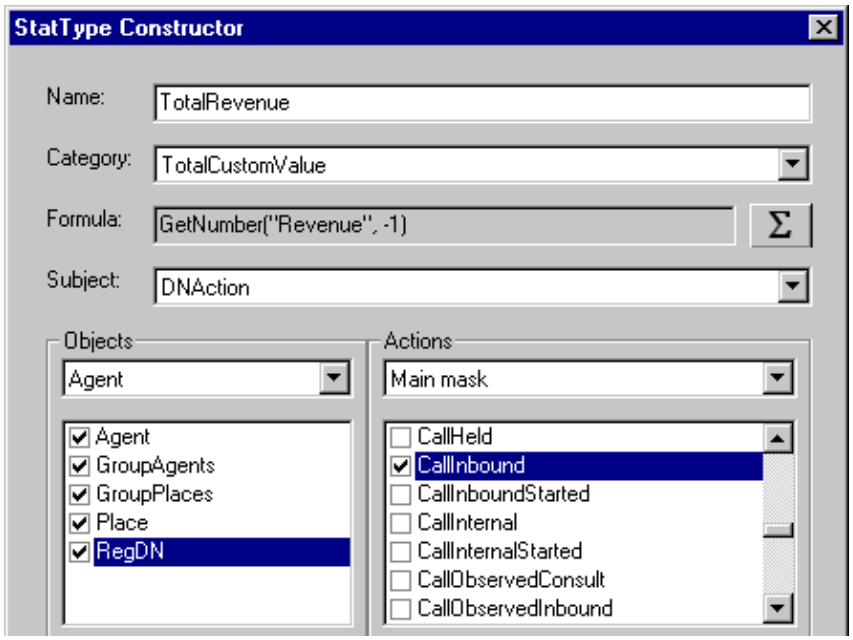


Figure 25: Finishing the TotalRevenue Statistical Type

8. Click `OK` to save the stat type definition.

   Data Sourcer writes the definition to both the Configuration Server and ODS.

Defining Custom Formulas to Stat Types by Using Configuration Manager

The `Formula` configuration option of a stat type section in a Stat Server application is where you apply a custom formula to a statistic. As defined in Figure 25, Figure 26 shows the `TotalRevenue` stat type configuration section as it appears in Configuration Manager.

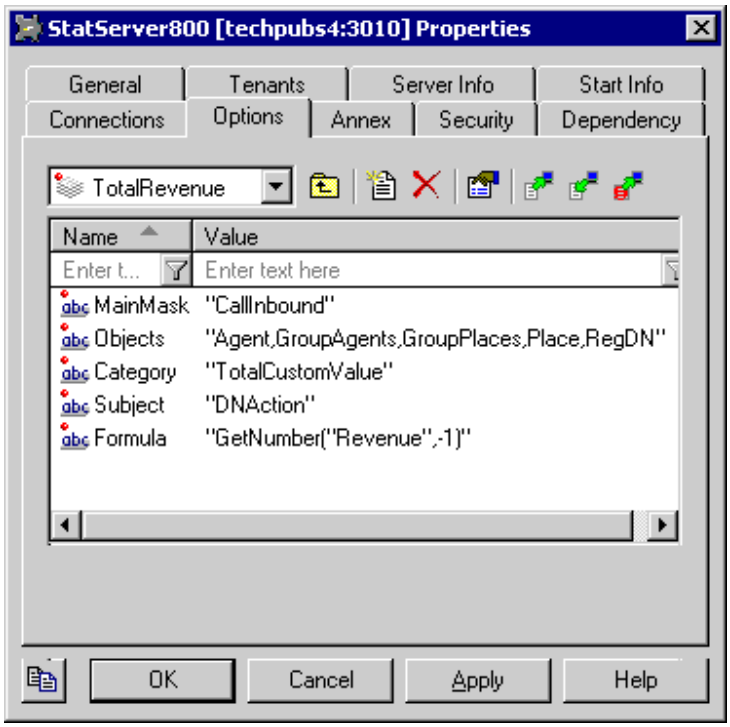
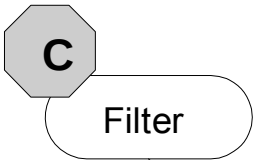


Figure 26: TotalRevenue Stat Type in Configuration Manager

Chapter

6 Creating Custom Filters



This chapter continues the Agent Revenue exercise by creating three custom filters within Data Modeling Assistant (DMA). These will filter the data set that is returned by revenue metrics that use the `TotalRevenue` stat type profile (described on page 34). These illustrate the filter customization point that is depicted in Figure 1 on page 12.

This chapter includes the following sections:

- Our Custom Filters: Platinum, Gold, and Regular, page 45
- DMA Filter Constructor Dialog Box, page 46
- Configuration Manager, page 48

You can create filters within the Stat Server application by using Configuration Manager. For the reasons that are stated in the Appendix, however, the bulk of this chapter illustrates filter creation via DMA.

Our Custom Filters: Platinum, Gold, and Regular

Our task is to create custom filters for each of the customer-segment groups in this example. The `Platinum` filter will check the user data that is associated with a call for a customer-segment designation of `Platinum`. Platinum customers are identified by the TKV pair identified by the `CS` key and a value of `Platinum`. Likewise, the `Gold` and `Regular` filters check for the `Gold` and `Regular` customer-segment designations, respectively. (How this user data is configured to determine which customer belongs to which group is beyond the scope of this exercise.)

DMA Filter Constructor Dialog Box

1. Open DMA, and select the same Data Sourcer application that was used to create the `TotalRevenue` stat type in Chapter 4.
2. In the `Statistical Parameters` section of the `Folder List`, click `Filters` to display the filters defined to ODS.
3. In the `Edit` menu, select `New` to open the `Filter Constructor` dialog box (shown in Figure 27).

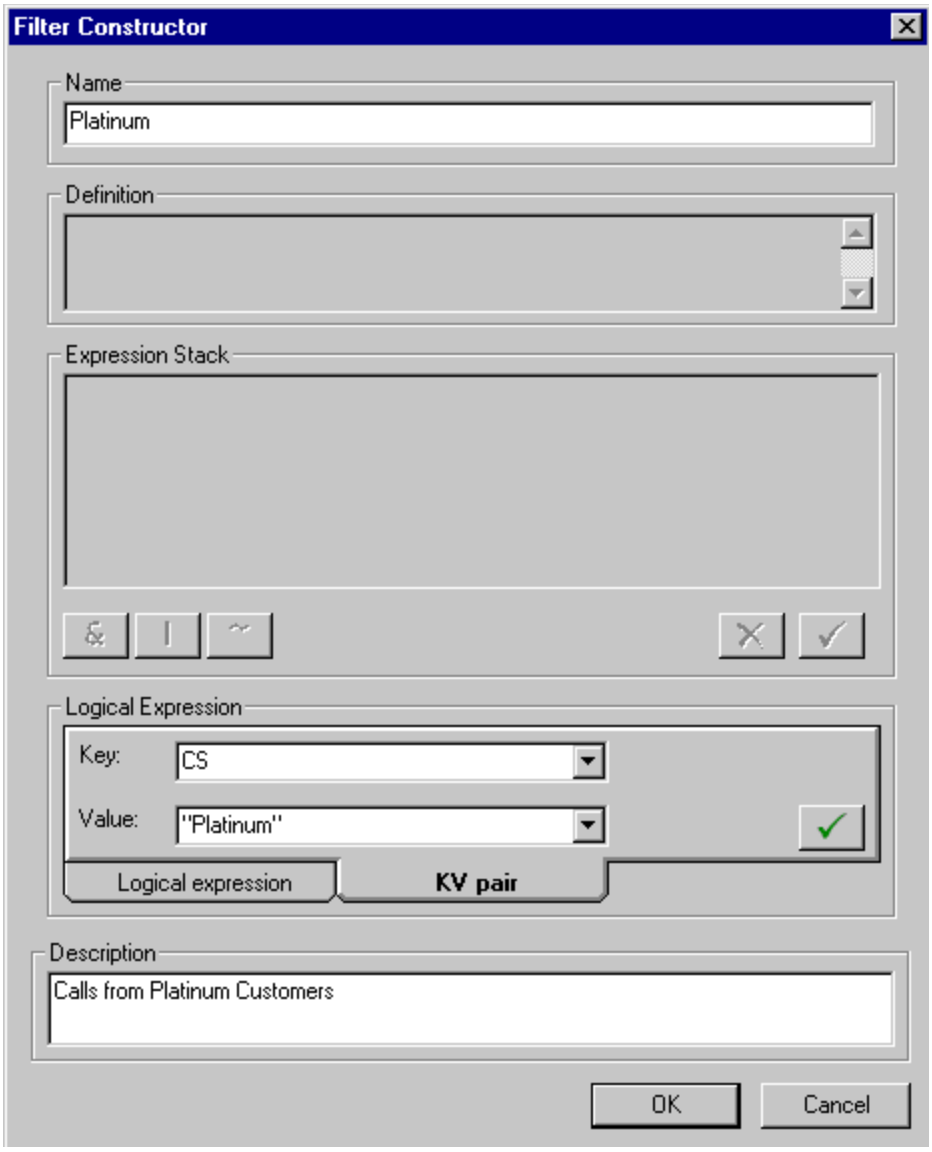


Figure 27: Creating a Filter

4. Create the `Platinum` filter by using the values that are shown in Figure 27 as a guide.

> Note: You must enter quotation marks (“”) around the value, but not around the key.

5. Click the check-mark button in the `Logical Expression` frame to move the function to the `Expression Stack` frame, in which it appears as a `UserData PairExists` function.
6. Click the check-mark button in the `Expression Stack` frame to move the formula to the `Definition` frame. Figure 28 shows a properly constructed filter.

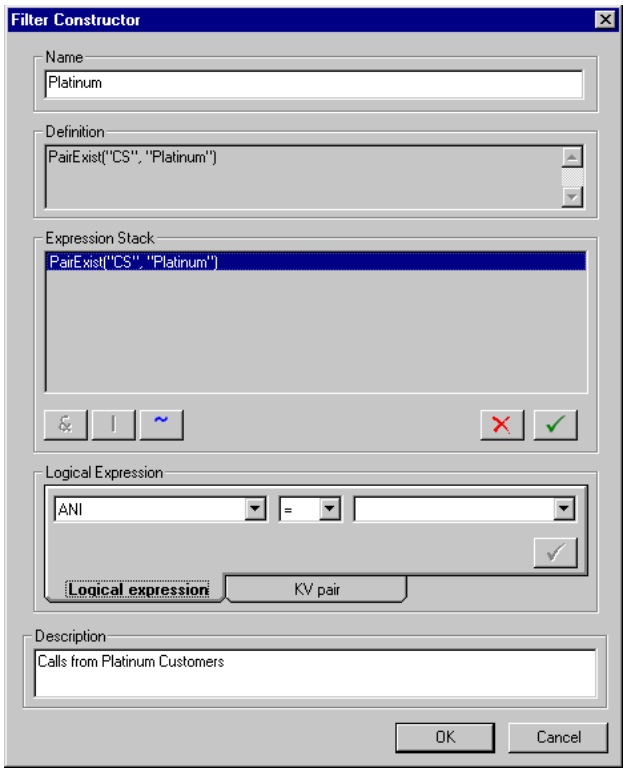


Figure 28: Finishing the Platinum Filter

7. Click `OK`, and then confirm the final definition of the new filter (see Figure 29).

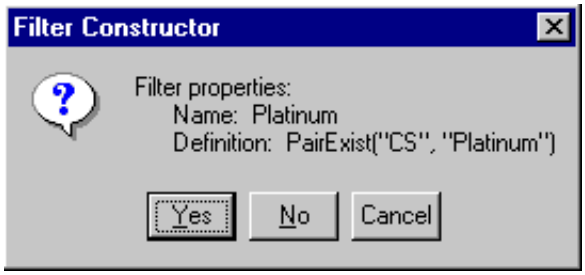


Figure 29: New Filter

8. Repeat Steps 3 through 7 to construct filters for Gold and Regular customers.

When you are finished, you should see the three filters in the right-hand pane (see Figure 30).

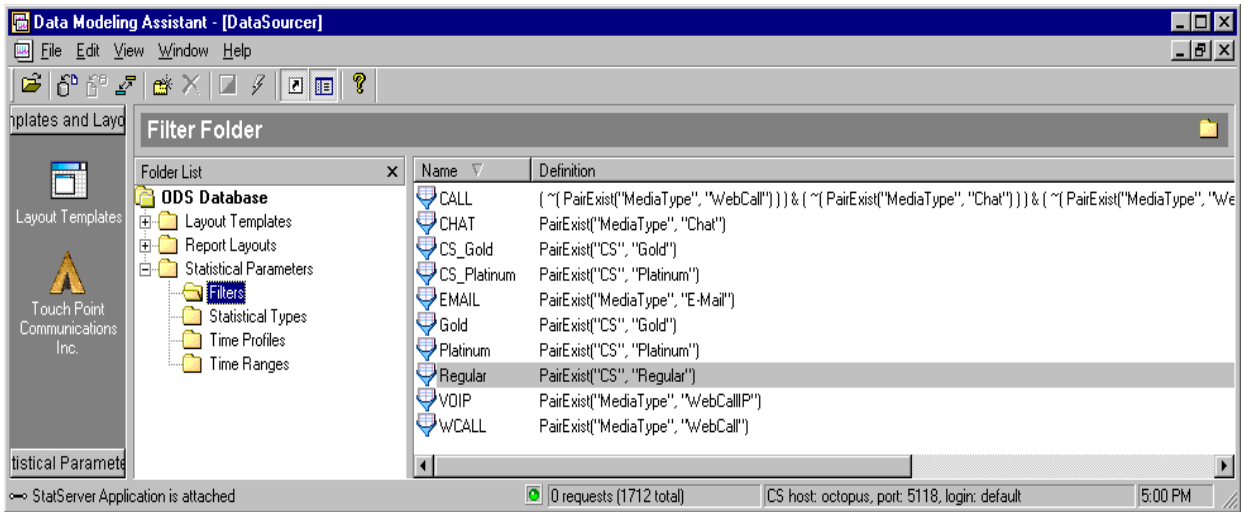


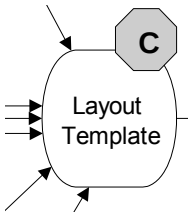
Figure 30: New Filters Added

Configuration Manager

Stat Server does not reference the objects that are listed in the `Filters` Configuration Server folder. A Stat Server application references its own configuration for filter definition.

Chapter

7 Creating Custom Layout Templates



To continue the Agent Revenue exercise, we next combine the elements that we have created thus far to build a layout template on which our report will be based. Layout templates define the data that is to be collected. Reports need not be created via layout templates; they can be built without inheriting template attributes. However, creation of a layout template for this exercise both provides greater portability for deployment to other tenants in multi-tenant environments and illustrates yet another customization point in the Historical Solution Reporting Model.

This chapter includes the following sections:

- Our Custom Layout Template: AG_REVENUE, page 49
- The Template Creation Wizard, page 50

Note: This chapter creates a polished layout template right from the start. In practice, however, reports that are based on newly created templates might go through refinement before they yield the desired results. There are some limitations with respect to editing existing layout templates for which data collection has begun. For this reason, you should follow the customization guidelines that are outlined on page 15 to test the results from reports that are not based on templates.

Our Custom Layout Template: AG_REVENUE

We shall create our custom layout template, `AG_REVENUE`, by using the Template Creation Wizard in DMA. As a basis, we shall build this template by using the four custom `REVENUE` statistics that were created in Chapter 8. You will recall

that these were built upon a custom stat type (TotalRevenue), a custom formula, and three custom filters (REVENUE_PLATINUM, REVENUE_GOLD, and REVENUE_REGULAR). To complete our template's definition, we shall assign a predefined time profile to collect data over 15-minute intervals. You can create layout templates only by using DMA.

The Template Creation Wizard

1. Open DMA, and select the same Data Sourcer application that was used to create the TotalRevenue stat type in Chapter 4.
2. In the Templates and Layouts section, click the Layout Templates icon to display the folder list of layout templates, report layouts, and statistical parameters that are defined to ODS.

3. Right-click the Layout Templates folder in the folder list, and then select New from the context menu that appears.

   The Template Creation Wizard opens in the Layout Template – Common Info page.
4. Specify basic information to identify the AG_REVENUE layout template, as shown in Figure 31, and then click Next:
   a. In the Object Type list box, select Agent.
   b. In the Template Name box, enter AG_REVENUE.
   c. In the Layout Name box, enter Agent Revenue. This is the default name that is assigned to report layouts that are built from this layout template.
   d. Enter a short description in the Description box.

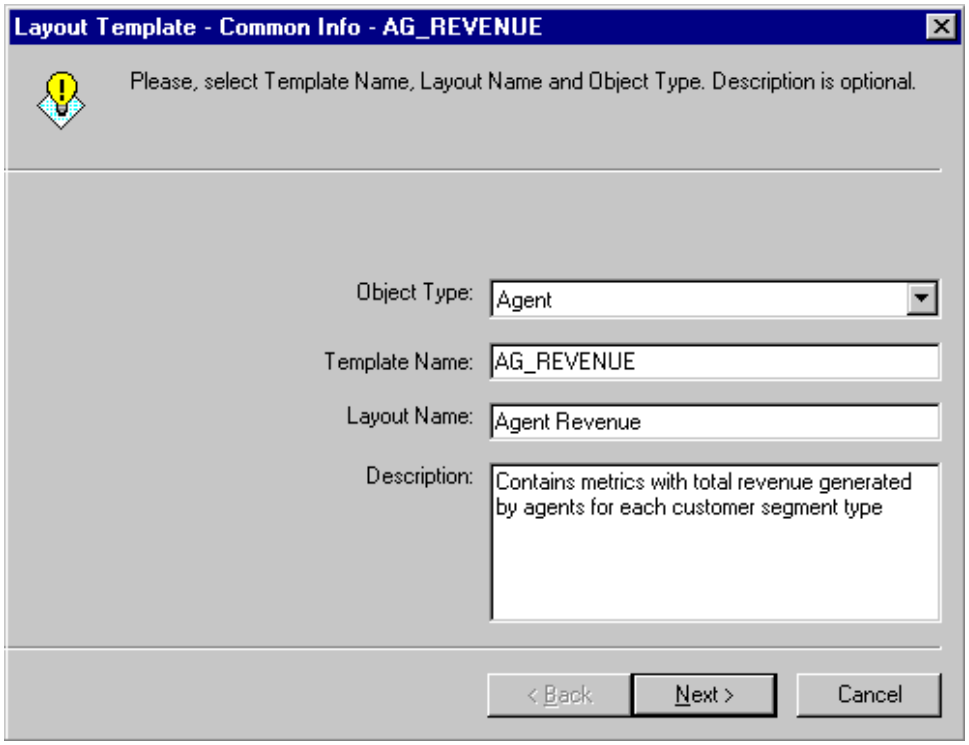


Figure 31: Creating a New Layout Template

The `Layout Template – Statistics` page appears, for you to add/define statistics to the layout template.

5. Click the `New` button to invoke the Statistic Wizard. Creation of statistics is another point of customization in the Historical Solution Reporting Model and is described separately in Chapter 8 (see that chapter for instructions on how to create the four custom statistics).

   When done, control returns to the `Layout Template – Statistics` page, in which all four statistics are displayed (see Figure 32).

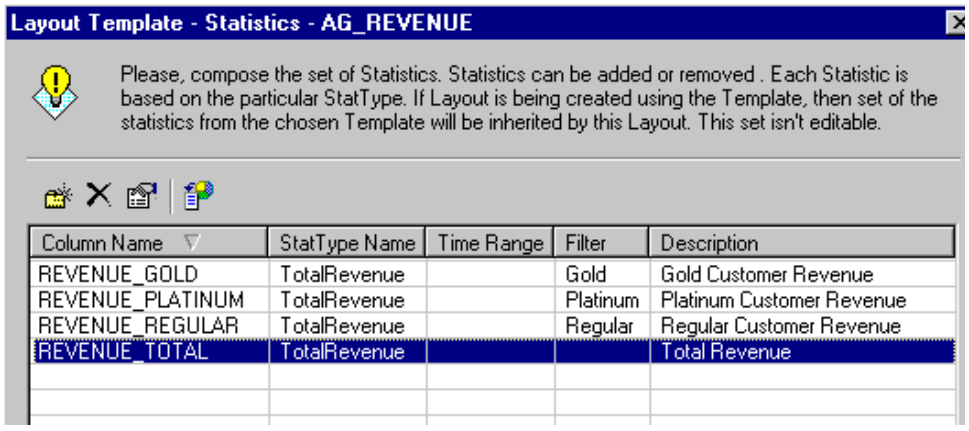


Figure 32: Inserting All Metrics

6. Click `Next` to advance to the `Time Profile` page of the Template Creation Wizard.

   Time profiles are yet another point of customization in the Historical Solution Reporting Model. In this example, however, we shall use the predefined, Genesys-provided time profile shown in Figure 33.

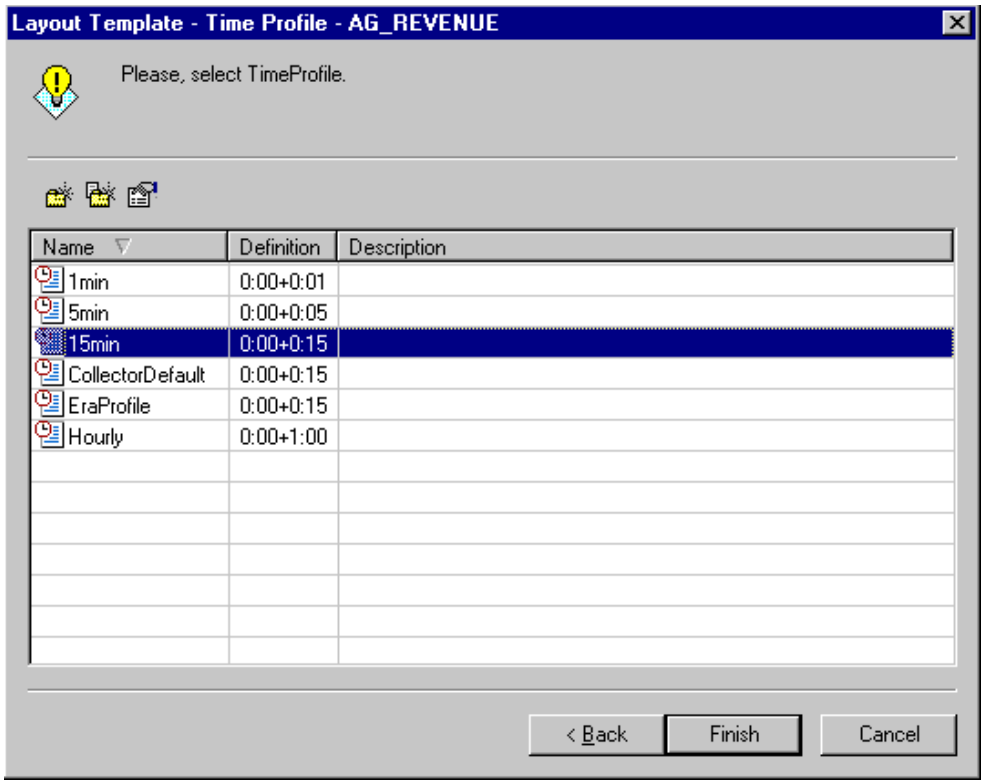


Figure 33: Selecting a Time Profile

7. Select the `15min` time profile, which is defined as 0:00+0:15.

   This profile instructs Data Sourcer to retrieve metrics from Stat Server and reset them to zero every 15 minutes.

8. Click `Finish` to save the layout template.

   Notice that the `AG_REVENUE` layout template has been added to the `Layout Templates` folder (see Figure 34). It has also been stored in ODS.

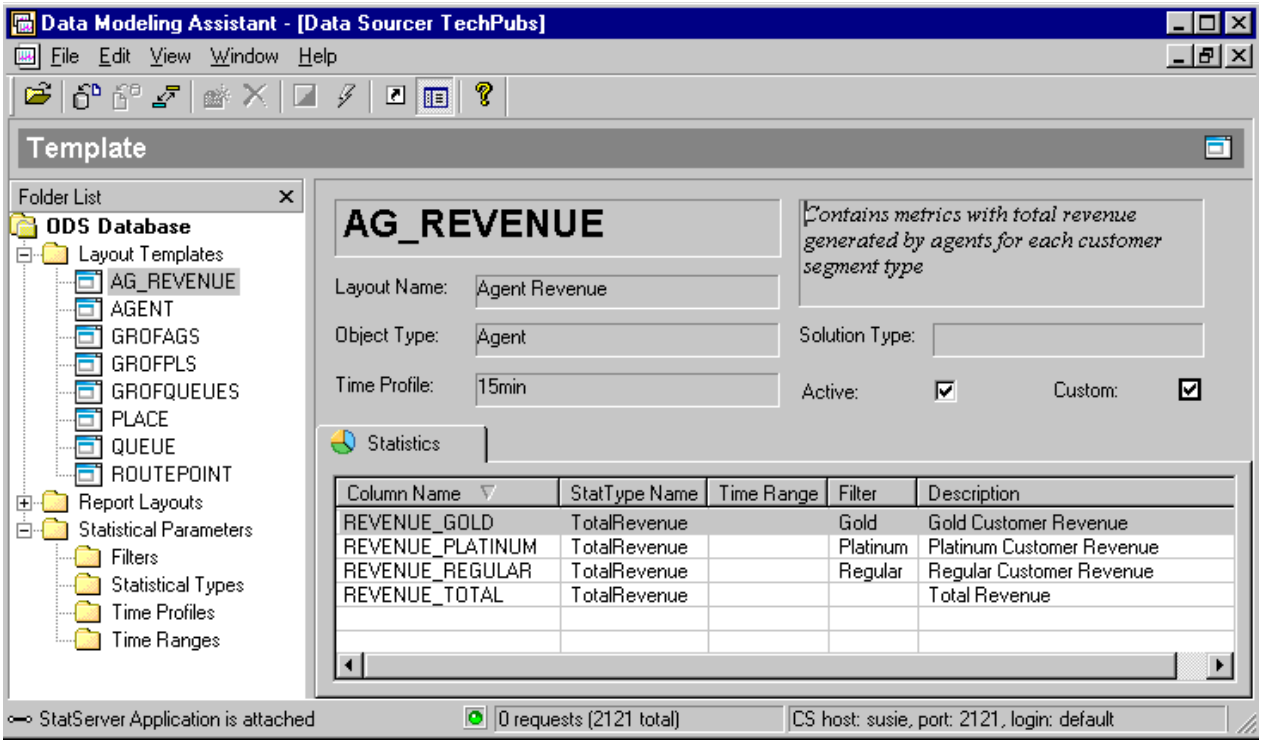
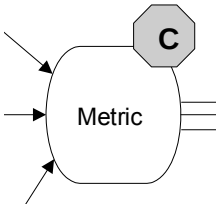


Figure 34: Finishing Template Creation

Chapter

8 Creating Custom Statistics



This chapter uses the Agent Revenue exercise as a backdrop to illustrate creation of custom statistics. The statistics that we shall create herein provide the basis of the AG_REVENUE layout template that we created in Chapter 7. Statistics are one attribute of layout templates and report layouts that define the data that is to be collected. Other attributes include the contact center objects to which this data applies and a time profile, that specifies the unit of time over which this data is aggregated.

Historical Reporting statistics are created via the Statistic Wizard, which you can invoke only when managing a layout template or report layout. However, to maintain focus on this one point of customization in the Historical Solution Reporting Model, creation of layout templates and report layouts is discussed separately in Chapters 7 and 9.

This chapter includes the following sections:

- Our Custom Revenue Statistics, page 55
- The Statistic Wizard, page 56

Our Custom Revenue Statistics

The schema (which is shown Figure 2 on page 14) for our Agent Revenue report requires four custom statistics:

- REVENUE_TOTAL
- REVENUE_GOLD
- REVENUE_PLATINUM
- REVENUE_REGULAR

Their definition relies on the custom elements created in Chapters 4, 5, and 6. Data Modeling Assistant (DMA) is the only Genesys tool that you can use to create Historical Reporting statistics for Data Mart. Do not confuse metrics with statistics. Metrics, when they are applied to a specific contact-center object, produce a statistic. (This is described in the *Overview* book of the *Reporting Technical Reference* series.) Historical Reporting metrics, on the

other hand, can be defined by using Hyperion software or any third-party reporting or RDBMS tool.

The Statistic Wizard

To create the `REVENUE_PLATINUM` statistic:

1. Open DMA, and select the same Data Sourcer application that was used to create the `TotalRevenue` stat type in Chapter 4.
2. In the `Layout Templates` folder, select the `AG_REVENUE` layout template that you created in Chapter 7.
3. In the `Layout Template – Statistics` page, click the `New` button to invoke the Statistic Wizard.
4. In the `Stat Types` page, select the `TotalRevenue` stat type from the list, as shown in Figure 35, and then click `Next`.

   Note that the properties of the selected stat type appear in the `Properties` frame.

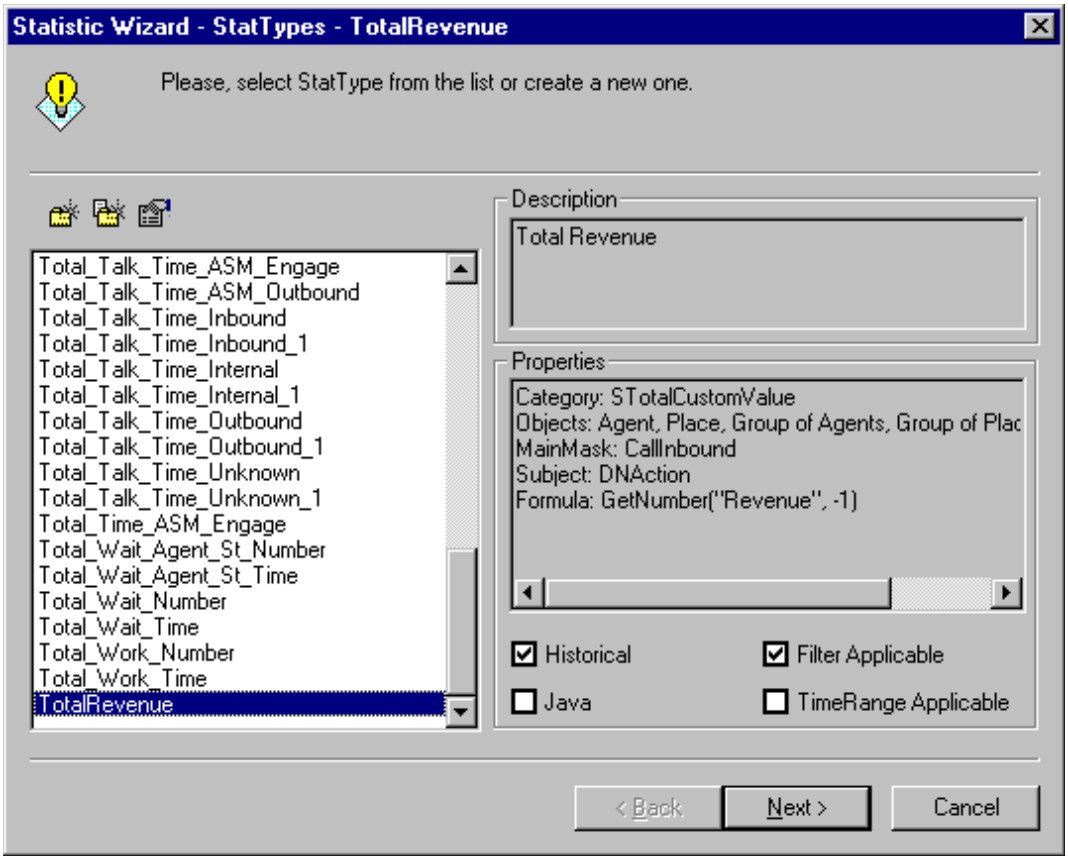


Figure 35: Adding a Stat Type to the Layout Template

5. In the `Filters` page, select the `Platinum` filter (shown in Figure 36) and then click `Next`.

   We use this filter (which you created in Chapter 6) to restrict the `TotalRevenue` values that are returned to those that pertain only to Platinum customers.

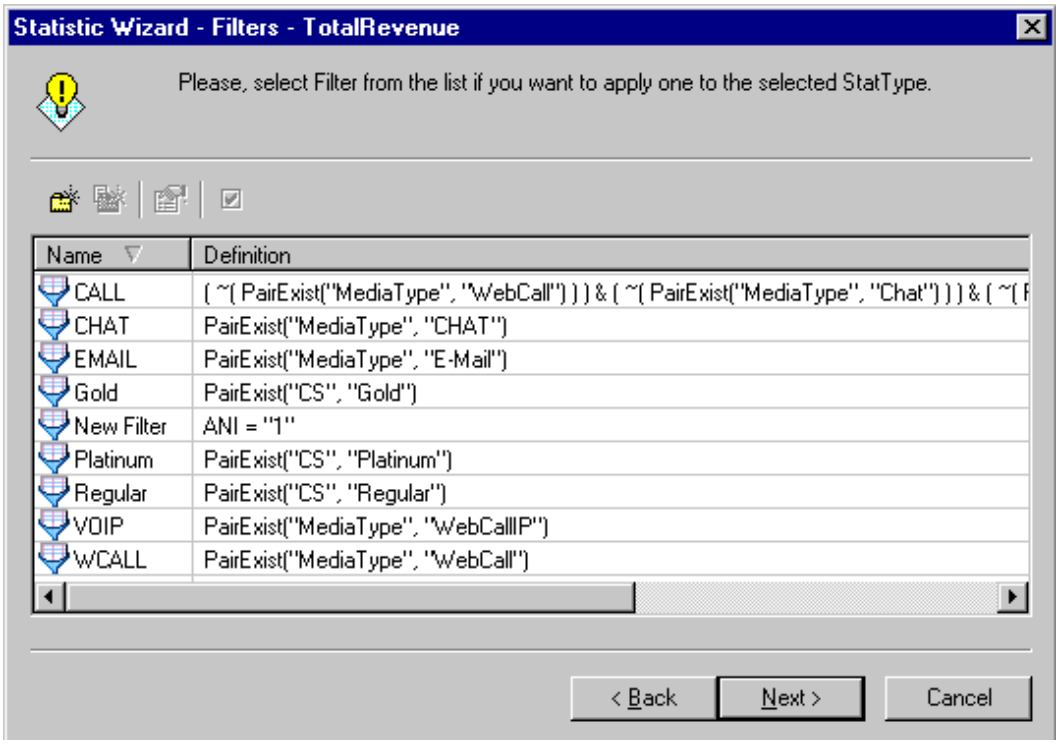


Figure 36: Selecting a Filter

6. In the `Column Info` page, type a unique column name and short description (as shown in Figure 37), and then click `Finish`.

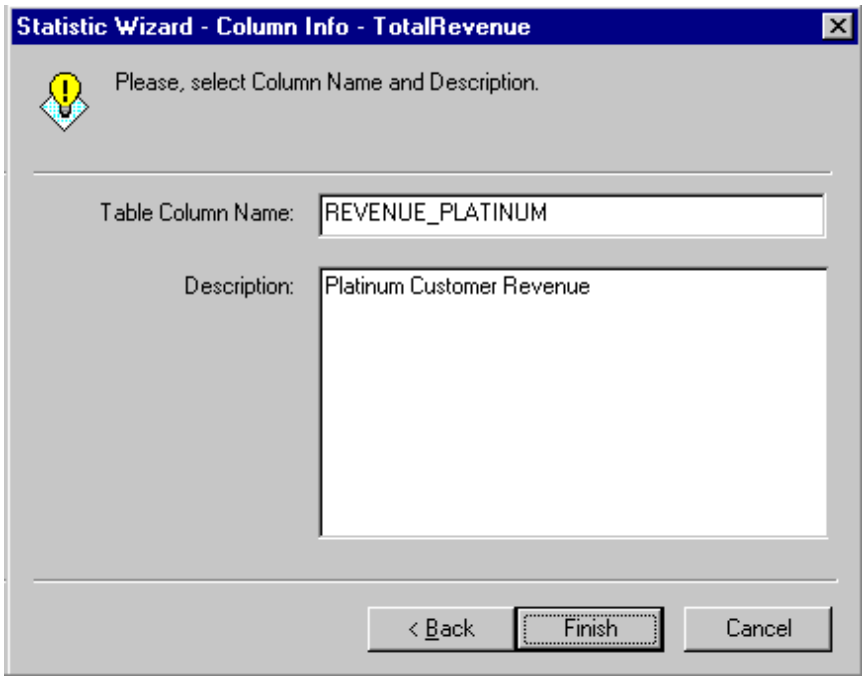


Figure 37: Selecting a Column Name

Control returns to the `Layout Template - Statistics` page, in which you can define more statistics to the layout template. (see Figure 38). This example requires three additional statistics.

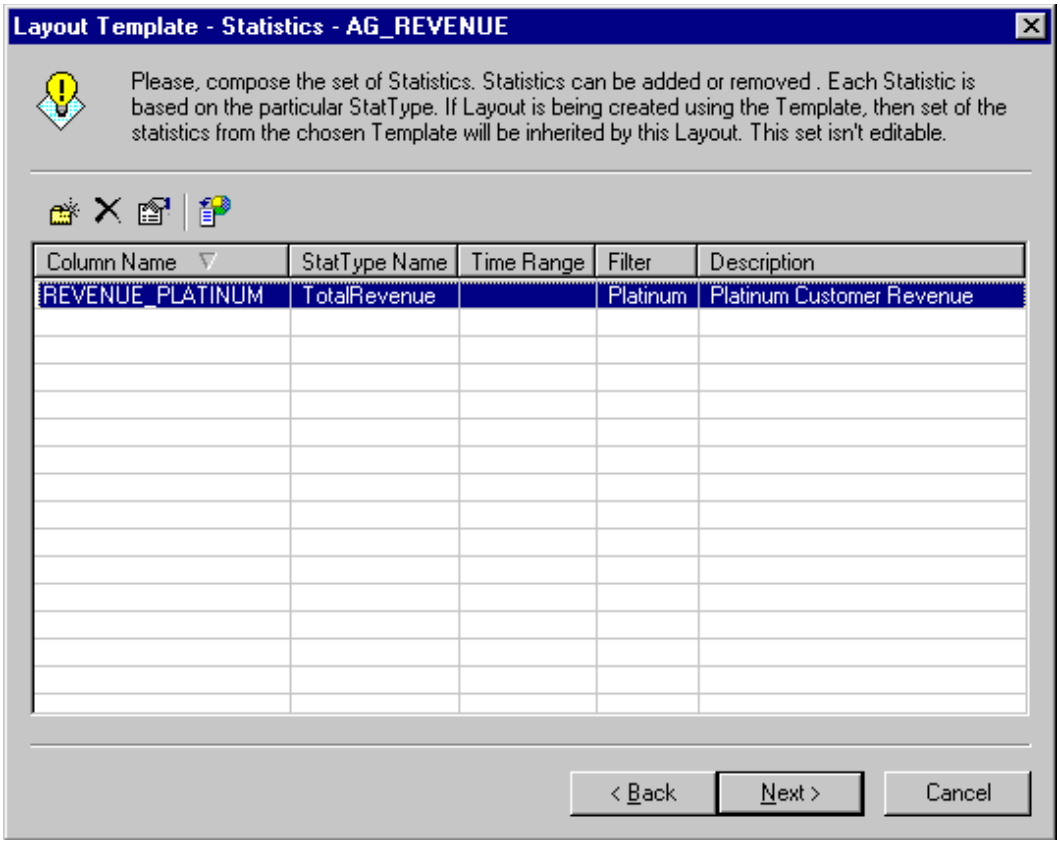
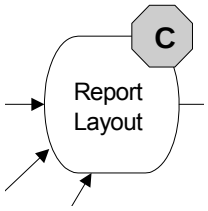


Figure 38: Finished Metric for Platinum Customers

7. Repeat Steps 3 through 6 to define statistics for Gold customers (`REVENUE_GOLD`) and Regular customers (`REVENUE_REGULAR`), as well as an unfiltered statistic that measures the total revenue generated by all customers (`REVENUE_TOTAL`).

Chapter

9 Creating Custom Report Layouts



Next along the path of our Agent Revenue exercise is building a report layout. It is via the definition of this report layout that Data Sourcer will collect the data that will be requested by the report that we create in Chapter 10. In this regard, report layouts differ from layout templates—Data Sourcer does not collect data for templates.

This chapter illustrates yet another point of customization in the Historical Solution Reporting Model (which is shown in Figure 1 on page 12). It includes the following sections:

- Our Custom Report Layout: Agent Revenue, page 61
- The Layout Creation Wizard, page 62
- Activating the Report Layout, page 66

Our Custom Report Layout: Agent Revenue

We shall create our custom report layout from the `AG_REVENUE` layout template created in Chapter 7. Recall at Step 4c (on page 50) that we assigned a default name—`Agent Revenue`—to report layouts that are created from the `AG_REVENUE` template. We shall use this name.

Also, we shall use the Layout Creation Wizard in Data Modeling Assistant (DMA) to create this report layout. Report layouts should be created only by using this tool.

The Layout Creation Wizard

To create the `Agent Revenue` report layout:

1. Open DMA and select the same Data Sourcer application that was used to create the `TotalRevenue` stat type in Chapter 4.
2. In the `Templates and Layouts` section, click the `Layout Templates` icon to display the folder list of layout templates, report layouts, and statistical parameters that are defined to ODS.
3. From the folder list, right-click the `Report Layouts` folder, and select `New` from the context menu that appears. This opens the Layout Creation Wizard, which is shown in Figure 39.

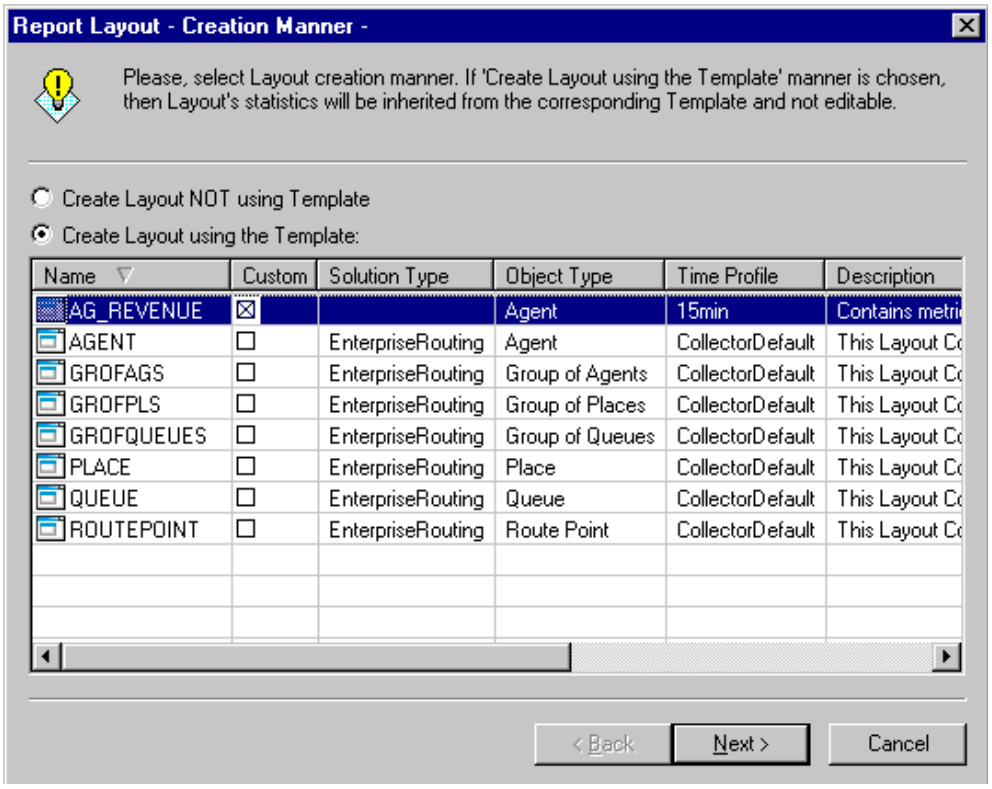


Figure 39: First Page of the Layout Creation Wizard

4. Designate the manner of report layout creation:
   a. Select the `Create Layout Using the Template` radio button.
   b. Select the `AG_REVENUE` layout template.
   c. Click `Next` to advance to the `Common Info` page of the Wizard (see Figure 40).

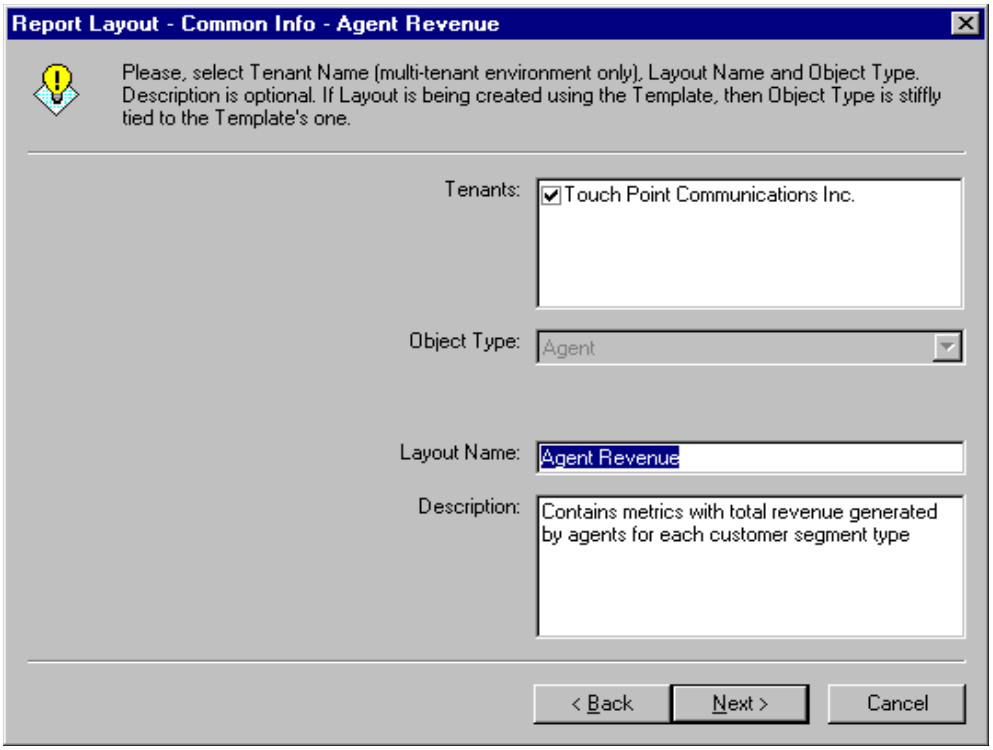


Figure 40: Creating a New Report Layout

Note that this page is prepopulated with the information from layout template creation (see Figure 31 on page 51). In multi-tenant environments, be sure to select the appropriate tenant.

5. Click `Next` to advance to the `Objects` page of the Wizard, which is shown in Figure 41.

   Because our report layout is based from a template, it inherits the object type that we selected during its creation. You cannot change this type, but you can specify the group of objects of that type for which Data Sourcer should collect data.

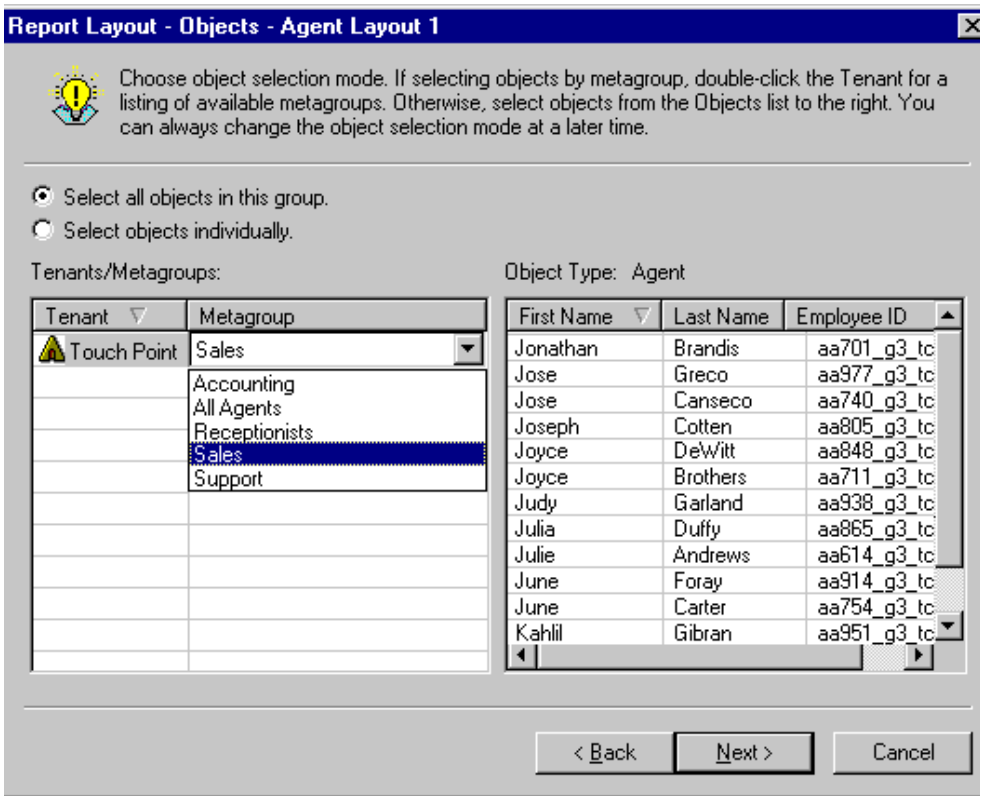


Figure 41: Selecting a Metagroup

6. On the `Objects` page, we select the `Sales` metagroup for this report layout, and click `Next`.

   The `Sales` agent group generates revenue, so that we want information about all of the members of this group.

7. Click `Next` to open the `Statistics` page of the Wizard (see Figure 42).

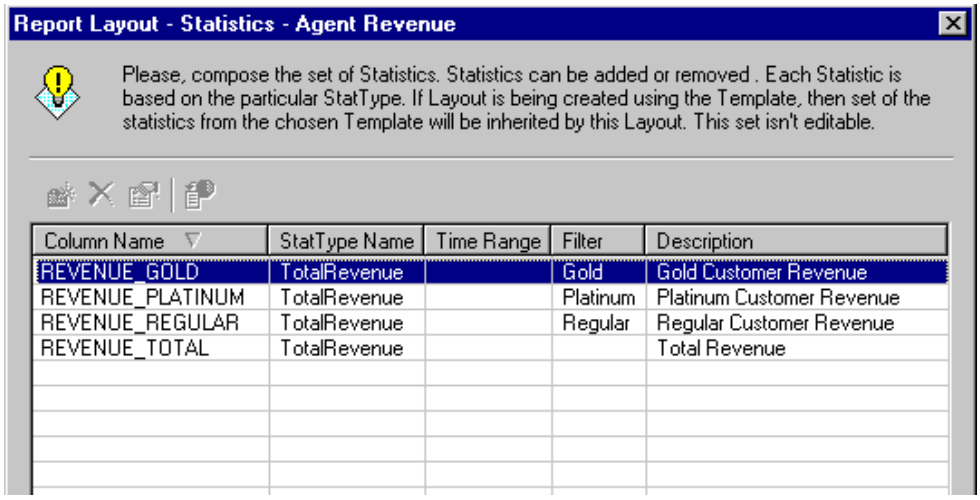


Figure 42: Viewing Metrics in Report Layout

On this page, we see prepopulated the four statistics that we defined during layout template creation. Because this report layout is being created from a layout template, we cannot edit the statistics on this page.

8. Click `Next` to open the `Time Profile` page of the Wizard (see Figure 43).

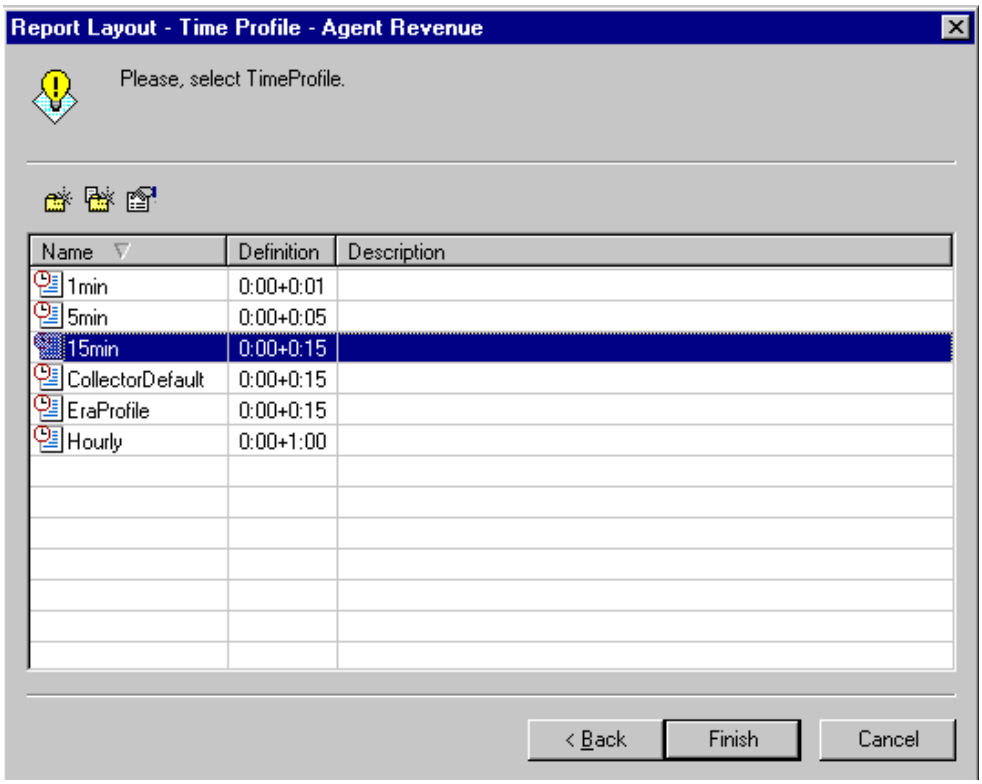


Figure 43: Viewing the Time Profile in the Report Layout

9. Select the `15min` time profile, and click `Finish` to complete report-layout creation.

> `Note:` It is not necessary to select the same time profile that was defined during layout template creation.

Activating the Report Layout

After creating our report layout, we must activate it in order for Data Sourcer to begin gathering statistical data.

1. Right-click the `Agent Revenue` report layout.
2. Select `Activate` from the context menu that appears (see Figure 44).

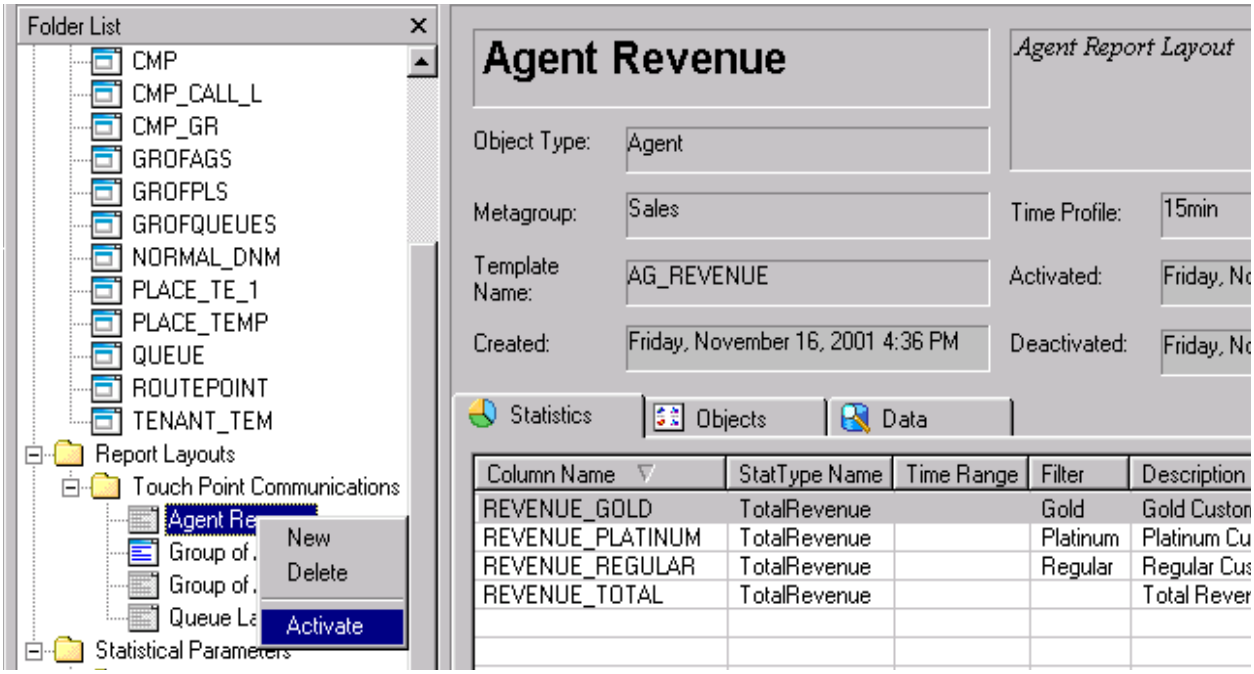


Figure 44: Activating the Agent Revenue Report Layout

Data Sourcer collects the requested data from Stat Server and stores it to ODS. However, this data must be ported over to the Data Mart and aggregated in order for it to be available for reporting by the Information Delivery Services. The next chapter describes a bit of ETL Runtime operation that accomplishes this action and describes report creation by using CC Analyzer Report Generation Assistant.

Chapter

10 Loading and Aggregating Data

Following its usual schedule, ETL Runtime creates report folders in the Data Mart for each activated report layout in ODS. Each report folder is based on a folder template that contains the specified number of aggregation levels. Through ETL Assistant, you can view these report folders, determine to which Data Mart tables data is written, and monitor the ETL transformation and aggregation process. Figure 45 on page 68 shows the report folders that were generated for the `Agent Revenue` report folders created in Chapter 9.

This chapter completes the Agent Revenue exercise by creating the report that answers the following question:

> How much revenue did each of the three agents in the Sales group—Joseph Cotten, Cindy Crawford, and Jeanne Crain—generate for specified days for each customer type, and for all customers?

Different from Chapter 2, this chapter illustrates report creation (the last customization point that is shown in Figure 1 on page 12) by using the Genesys-designed user interface to Hyperion Interactive Reporting: Report Generation Assistant (RGA).

This chapter includes the following sections:

- Using ETL Assistant to Identify the Report Folder ID, page 68
- Our Custom Report: The Agent Revenue Report, page 69
- Using RGA to Create a Report, page 69
- Additional Customization Ideas, page 73

Using ETL Assistant to Identify the Report Folder ID

1. Open ETL Assistant and specify the connectivity parameters for your Data Mart.
2. Open the `Agent Revenue` report folder and expand its subfolders to see all views displayed in the `Report Views` pane (see Figure 45).

   `Note:` These folders appear only after ETL Runtime has completed data transformation and aggregation following layout template activation.

   Notice that the ID that is assigned to this folder is `6`. This is the RDBMS-generated value for report folders that ETL Runtime creates. Note this ID for later reference.

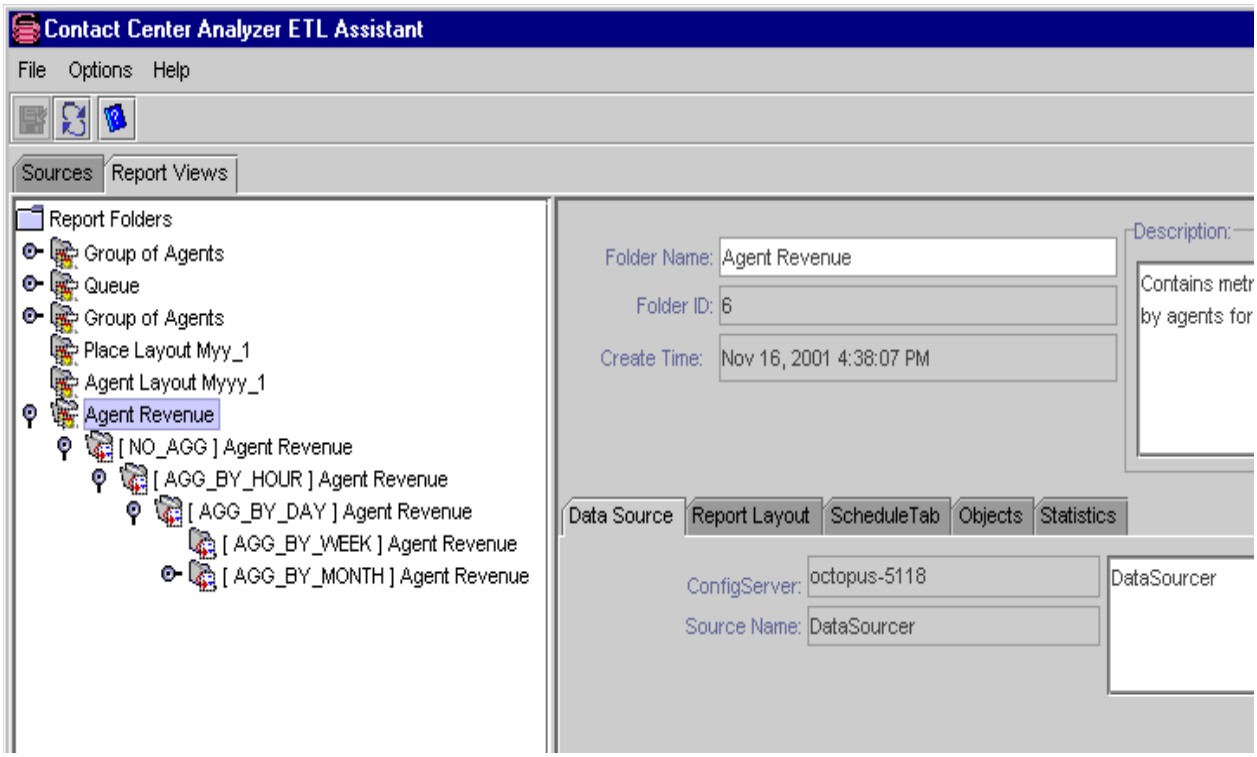


Figure 45: ETL Assistant View

Our Custom Report: The Agent Revenue Report

By drilling down to the AGG_BY_DAY Agent Revenue report folder, we see that the names of the Data Mart tables that house the targeted data are tied to the following aliases:

- R_AG_REVENUE_DAY
- O_AG_REVENUE_DAY
- T_AG_REVENUE_DAY

While having this information is necessary for creating custom Hyperion reports (as was shown in Chapter 2), the RGA user interface to Hyperion requires only the name of the report layout and report-layout ID.

Using RGA to Create a Report

1. Invoke RGAssistant.bqy to start RGA.
2. At the EIS Connect page, specify the connection file to log in to your Data Mart, and click Next.

   Note: The *Report Generation Assistant* book of the *Reporting Technical Reference* series describes how to create this connection file.

3. On the EIS Select Tenant page, select Touch Point Communications, Inc., and click Next.
4. On the EIS Select Object Type page, select Agent in the Object Type list, and click Next.
5. On the EIS Select Layout page, select Agent Revenue #6 in the Folder list, as shown in Figure 46, and click Next.

   #6 is a reference to the RDBMS-generated ID for the Agent Revenue folder shown in Figure 45 on page 68.

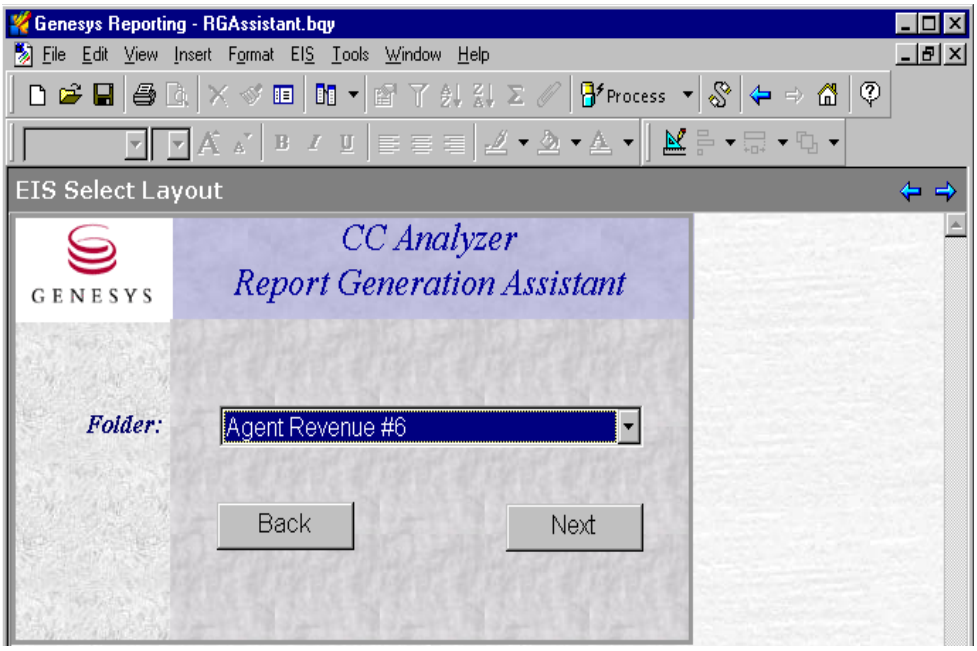


Figure 46: Selecting a Report Layout

6. On the `EIS Select View` page, select the `[AGG_BY_DAY] Agent Revenue` level, mark the `Table Alias` and `Statistics Alias` radio buttons, as shown in Figure 47, and then click `Finish`.

   Note: `Table Alias` is disabled in multi-tenant environments.

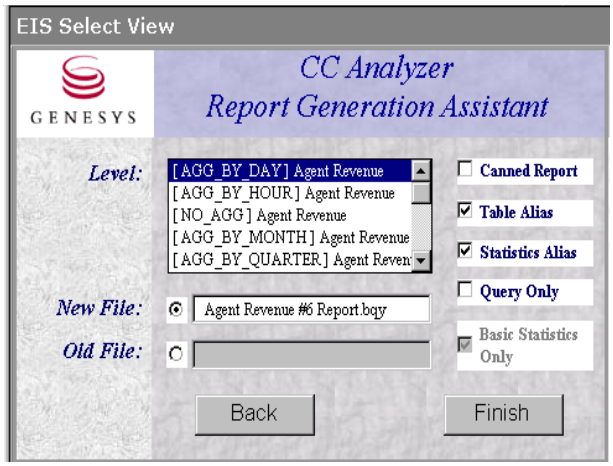


Figure 47: Selecting the Aggregation Level

7. On the `Query Assistant` page, qualify the query:
   a. Indicate over which dates to run the query.
   b. Select the desired agents in the `Objects` list, and click `Add`.
   c. Click `Process`.

Figure 48 shows us requesting the results of the three agents from our problem statement for February 18, 2003.

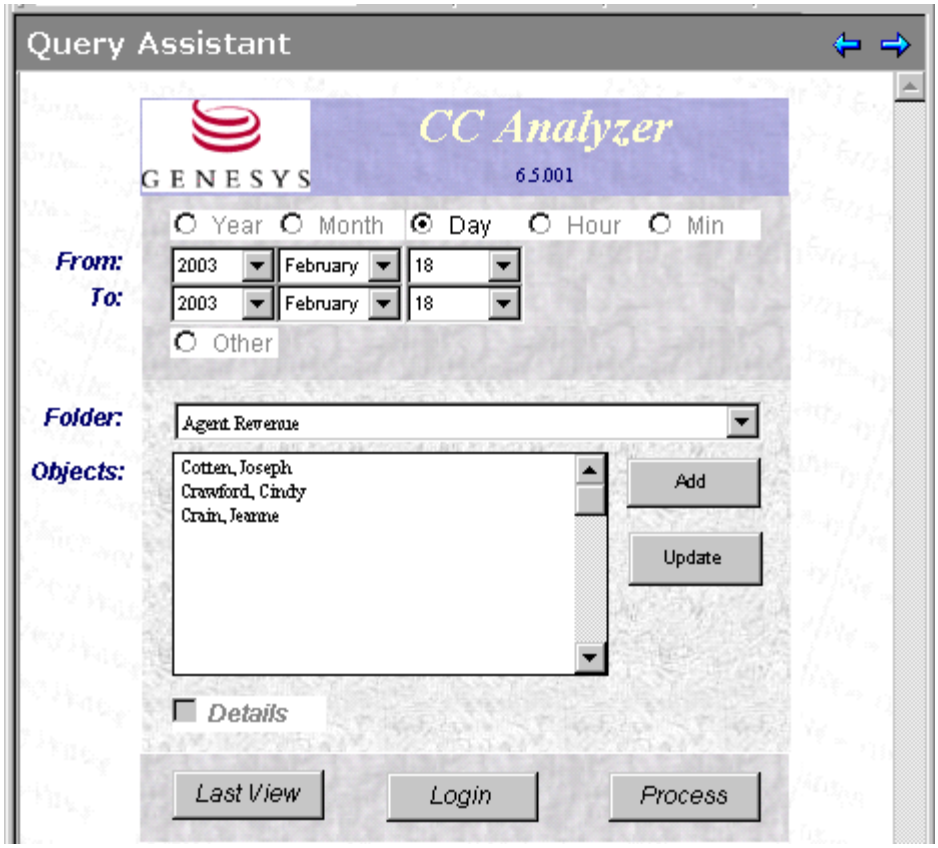


Figure 48: Specifying the Time Period and Objects

The `Navigation Assistant` appears, as shown in Figure 49.

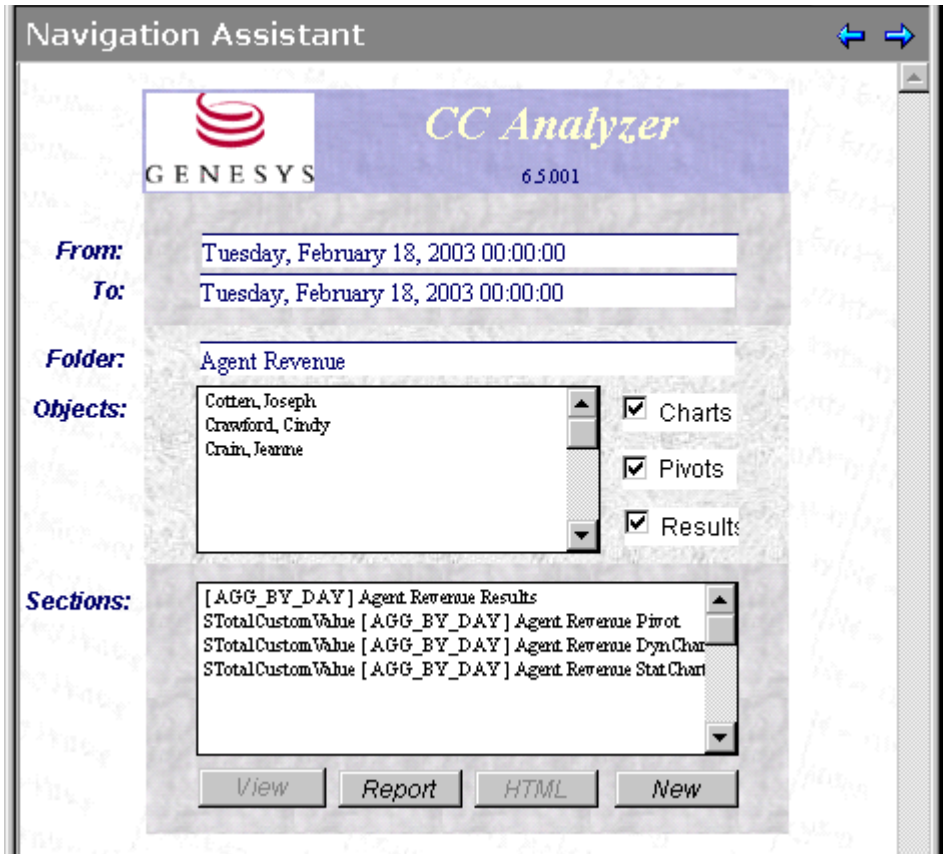


Figure 49: Navigation Assistant

8. Select `Charts`, `Pivots`, and/or `Results`, and click `Report` to view the results (see Figures 50 and 51).

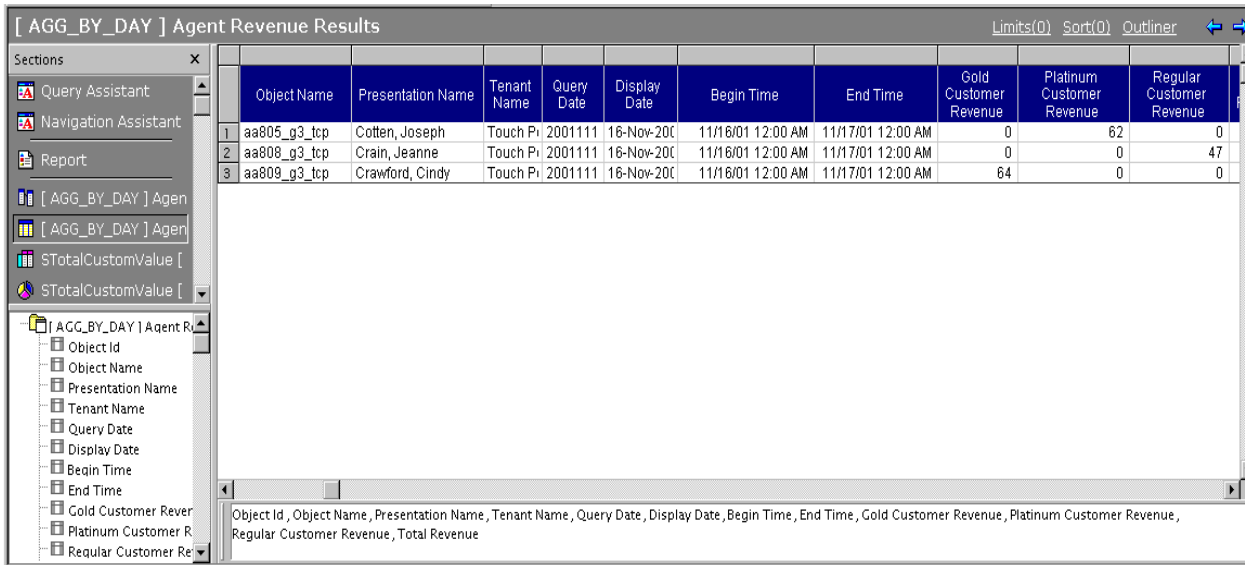


Figure 50: Viewing the Resulting Table

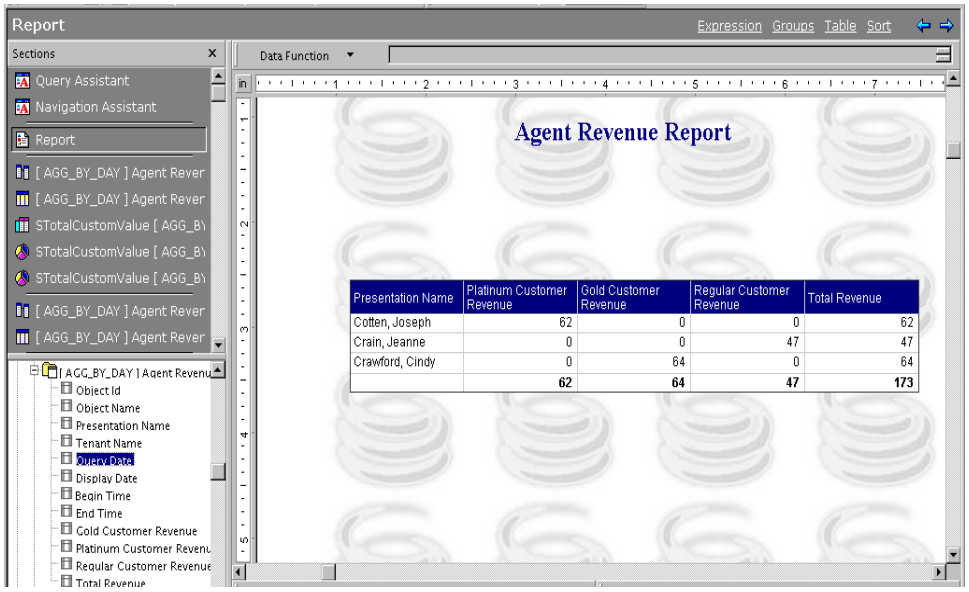


Figure 51: Final Report

Additional Customization Ideas

- To calculate total revenue for all Sales groups, you can customize a layout template that monitors an `Agent Group` object.
- Using HIRS' report customization features, you can add a row to your final `Agent Revenue` report that shows the revenue that is generated by only three of your agents.
- Using HIRS', you can calculate complex custom metrics, based on the revenue data that is collected by using the `Agent Revenue` report layout. For example, you can calculate the Return on Investment (ROI) for each agent in the Sales group by dividing the revenue that each agent generates yearly by the agent's yearly salary.

Chapter

11 Open Media Templates

This chapter provides Genesys' recommendation for how to create open media templates and the metrics that constitute them, for any custom media type that your environment might support.

This chapter assumes that you have already completed the steps that are required to set up your custom media environment, including:

- Creating the custom media servers that will process interactions, by using the Genesys Interaction SDK.
- Propagating all custom media types that your custom media server will handle to the Configuration Layer, by using the Configuration SDK.
- Designing the strategies to route interactions from your custom media server to the appropriate Genesys resource, by using the Genesys Universal Routing.

Refer to the *Genesys 8.0 SDK Documentation Set* for information about how to use the software developer kits that Genesys provides.

In addition, you must appropriately configure your Stat Server `Application` object to recognize your Java Runtime Environment and to load the `eService InteractionStat` jar archive of the MCR Extension (release 7.1, or later). The "Java Sections" section of the *Framework 8.0 Stat Server Deployment Guide* describes how to configure a Java section and its configuration options. Then, you must add this application to the connection properties of your Interaction Server application.

Finally, you must configure and install Reporting components. Refer to the *Reporting 8.0 Deployment Guide* for this information.

After your environment has been set up, you can create the elements that will ultimately be used in reports that summarize the interaction-handling activities of your custom media server. This chapter describes the steps for creating open media templates, divided into the following stages:

- Stage 1: Create Statistical Parameters, page 77
- Stage 2: Create CCPulse+ Templates, page 82
- Stage 3: Create ODS Layout Templates, page 86
- Stage 4: Create Report Layouts, page 88
- Stage 5: Run the Transformation Module, page 89
- Stage 6: Associate Historical Metrics to Real-Time Metrics, page 89

In addition, the following sections provide the definitions for all of the components you will need to create the recommended custom-media reports:

- Open Media Statistical Parameters, page 91
- Open Media Stat Types, page 93
- Open Media CCPulse+ Templates, page 102
- Open Media Real-Time Metrics, page 104
- Open Media ODS Layout Templates, page 111
- Open Media Historical Metrics/Data Mart Metrics, page 114

Each of these latter six sections describes one aspect or set of related elements of an open media template, using a series of miniature forms—one form for each element. Each form within a section collects the same information as the next form—only its values change from element to element. These forms also contain hyperlinks to other pages in this chapter, where that aspect of the template is defined in greater detail. The introductory material to each of these sections describes form content.

Throughout this chapter, we provide examples of how to create the various elements of nine custom reports—*CM1/2/3 Queue Handling, CM1/2/3 Agent Handling,* and *CM1/2/3 General Handling*—that summarize the interaction-handling activities of the *CMIxn Server*. We use the CMIxn Server as an example of a custom media server that is designed to monitor the interactions received and sent from a group of DNs that are configured within Configuration Server to handle *CM1, CM2,* and *CM3* media types.

Finally, the last section of this chapter explains how to modify the sample templates for open media provided in Genesys release 8.0:

- Customizing the Genesys-Provided Sample Media Templates, page 118

Stage 1: Create Statistical Parameters

Before you build reports and views that are based on the custom historical and real-time templates that you create for your custom media environment, Genesys recommends that you first create the necessary parameters on which the statistics in those reports will be based. These parameters include:

- Filters.
- Custom-media stat types.
- Time profiles

This section describes how to create each of these parameters in turn. As you create these statistical parameters, be sure to check the Stat Server log to ensure no errors in parameter definition. The Stat Server `debug-level` log option should include `Init` and the `verbose` option should be set to `all`.

Creating Custom Filters

If your custom media server will process more than one type of interaction, you should create filters to enable the separation of interactions according to their media type. If your custom media server will process more than one media type, and you want your reports to reflect media-driven activity, create the filters that are appropriate for your environment. If your custom media server will process only one type of media (or if you do not care that all media types will be grouped together in your reports), you can skip this activity altogether.

`Note:` Although you can also define filters directly within Configuration Manager, Genesys recommends that you use DMA to create them. See the Appendix on page 125 for more information.

To create filters:

1. In DMA, open the `Statistical Parameters` folder.
2. Right-click the `Filters` folder and select `New` in the shortcut menu that appears.
3. In the `Filter Constructor` dialog box, define your filter. The following steps describe how to create one filter for this sample CMIxn server.
   a. In the `Name` field, type a unique name for your filter. For this sample environment, we name this filter `CM1`.
   b. On the `KV pair` tab of the `Logical Expression` frame, type `MediaType` in the `Key` box and `"CM1"` in the `Value` box. The value must include the quotation marks.
   c. Click the green check mark button to the right of the `Value` box to move the key and its value up to the `Expression Stack`.

Figure 52 illustrates how the dialog box appears after you have completed these steps.

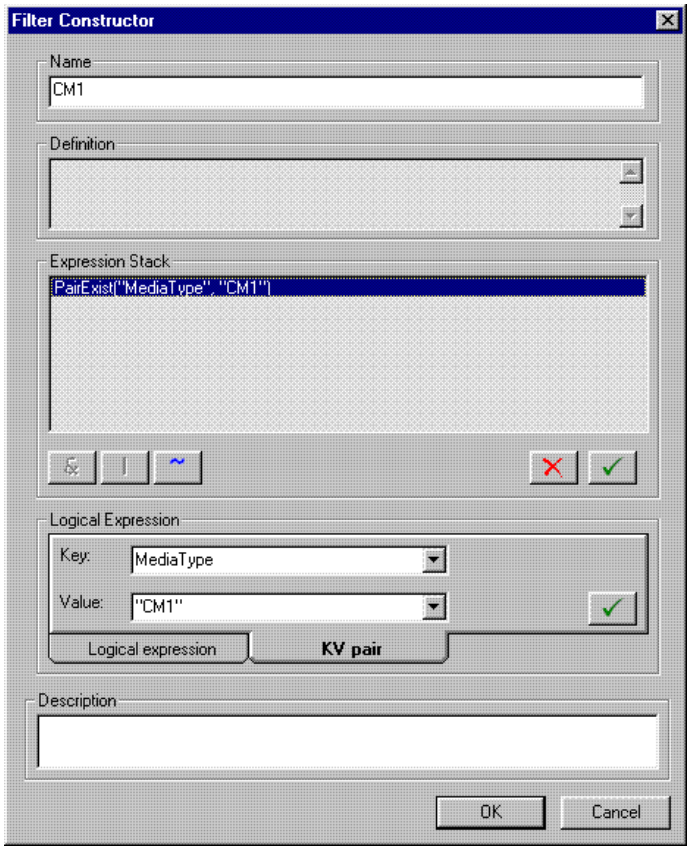


Figure 52: Creating the CM1 Filter

d. With the expression selected in the `Expression Stack`, click the second green check-mark button to move the expression to the `Definition` frame.

e. Click `OK`.

4. Repeat Steps 2 and 3 to create filters for the other custom media types to be handled in your environment. (`CM2` and `CM3`, in this example).

`Note:` Do not use the Logical expression tab of the `Logical Expression` frame to define filters that are based on business attributes. Instead, you must use Configuration Server.

To create complex filters, you can define log expressions and/or key-value pairs by using the & (and), | (or), and ~ (not) logical connectives. Refer to the "Filter Constructor Dialog Box" topic in *Reporting 7.6 Data Modeling Assistant Help* for more information about creating filters.

Creating Custom Stat Types

Stat Server 7.1 introduced a new statistical type attribute, `MediaType`, in order to further refine the values that Stat Server returns for a particular metric. This attribute functions in a similar manner to a Genesys filter that is based on key-value pairs. See the "Statistical Type" section in the *Overview* book of the *Reporting Technical Reference* series for a more detailed description of this attribute.

The recommended templates in this sample environment contain statistics that are based on the following two types of custom-media stat types:

- Core stat types—For metrics that are derived directly within Stat Server
- Extension stat types—For metrics whose values are supplied to Stat Server by a custom media server

In this release, Genesys recommends that you use Configuration Manager to create and manage all stat types used in open media templates. The procedure for creating either type of stat type is the same.

The definitions for the recommended open media stat types that you should create begin on page 93. There are 8 core stat types and 15 extension stat types.

Core Stat Types

You can apply filters to metrics that are based on core stat types.

`Current_Interactions_In_Processing`	`Interactions_Processed`
`Inbound_Interactions_Stopped`	`Interactions_Processing_Time`
`Interactions_Accepted`	`Interactions_Rejected`
`Interactions_Offered`	`Interactions_Timed_Out`

Extension Stat Types

Unlike core stat types, you cannot apply filters to metrics that are based on extension stat types. Instead, to imitate filter behavior, you can design your stat type to include a `MediaType` attribute. Such is the case for all of the following extension stat types:

`<MD>_Current_In_Processing`	`<MD>_Minimum_Interactions`
`<MD>_Current_In_Processing_In_Queue`	`<MD>_Minimum_Interactions_In_Queue`
`<MD>_Current_In_Queue`	`<MD>_Stopped_Processing_Queue`
`<MD>_Current_Waiting_Processing`	`<MD>_Total_Entered`
`<MD>_Current_Waiting_Processing_In_Queue`	`<MD>_Total_Entered_Queue`
`<MD>_Maximum_Interactions`	`<MD>_Total_Moved_From_Queue`
`<MD>_Maximum_Interactions_In_Queue`	`<MD>_Total_Transfers`

These extension stat types rely on the data generated by the following 14 Java functions, which are included in the `eServiceInteractionStat` archive of the MCR Stat Server Java Extension (SSJE):

- `OMG Current In Processing`
- `OMQ Current In Processing`
- `OMQ Current in Queue`
- `OMG Current Waiting Processing`
- `OMQ Current Waiting Processing`
- `OMG Maximum Interactions`
- `OMQ Maximum Interactions`
- `OMG Minimum Interactions`
- `OMQ Minimum Interactions`
- `OMQ Total Stopped Processing`
- `OMG Total Entered`
- `OMQ Total Entered`
- `OMQ Total Moved`
- `OMG Total Transfers`

In these function names, `OMQ` stands for *Open Media Queue* which counts open media interactions that occur at interaction queues. `OMG` stands for *Open Media General,* which counts open media interactions that occur at one or more switches.

You must have the `eServiceInteractionStat` SSJE loaded within your Stat Server application, and you must configure Interaction Server connections to include your Stat Server application. Furthermore, there are several configuration options that you must set in order to load the extension. Refer to the *Framework 8.0 Stat Server Deployment Guide* for specific instructions.

To create these stat types:

1. In Configuration Manager, open the properties of your Stat Server `Application` object.
2. On the `Options` tab, create and name a new section and click `OK`.

   For this sample environment, we start with the first stat type that is listed on page 95, which is `Current_Interactions_In_Processing`, a core stat type. We name this section `Current_Interactions_In_Processing`.
3. Open the section you just created; add the appropriate options and values, as specified in the definition of this stat type; and apply your changes.

Name	Value
MainMask	InteractionHandling
Category	CurrentNumber
Subject	Action
Objects	Agent, GroupAgents, GroupPlaces, Place
Description	[*add your own description*]

   Genesys recommends that you always add a `Description` attribute to your stat type definition with an appropriate statement that describes the stat type's purpose.

   Figure 53 illustrates how the dialog appears after you have completed this step.

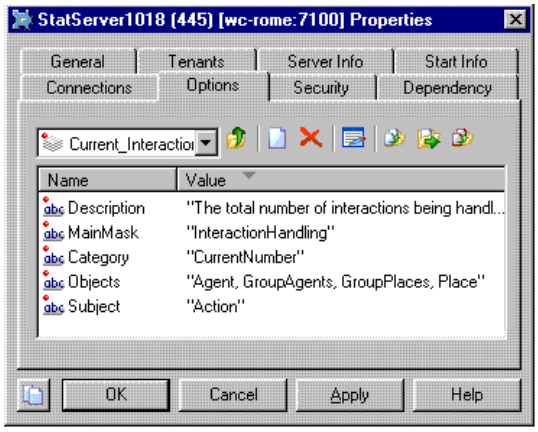


Figure 53: Creating Stat Types Within Configuration Manager

4. Repeat Steps 2 and 3 for the remaining stat types.
5. Click `OK` to close the application's properties.

Figure 54 illustrates the creation of the first extension stat type from the listing, `<MD>_Current_In_Processing`, which is described on page 97. In this example, the `CM1` filter is assigned as the value for the `MediaType` attribute to filter the values that are returned from the `OMG Current In Processing` class of the `eService InteractionStat.jar` Java Extension. The stat type is aptly named `CM1_Current_Interactions_In_Processing`.

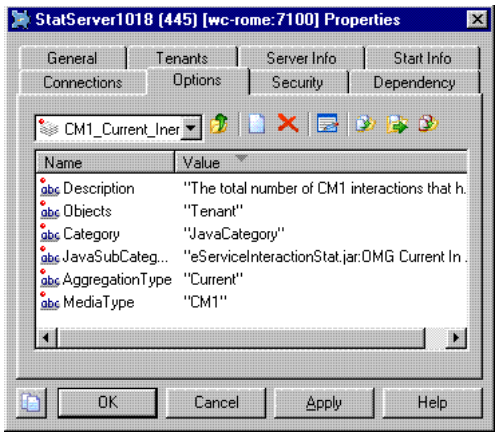


Figure 54: Extension Stat Type

For the extension stat types, you will need to repeat steps Steps 2 through 4 above for each media type that your custom media server processes.

Creating Time Profiles

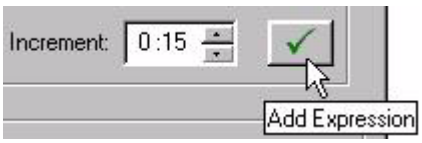
Historical Time Profile

All of the Genesys-provided historical Solution reports use the `Collector Default` time profile, which is set up in your environment when you deploy the reports. This parameter instructs Stat Server to send data to Data Sourcer every 15 minutes, beginning every night at midnight. In your custom-media

environment, however, this parameter might not pre-exist if you have not previously deployed the Genesys-provided reports.

To create the `CollectorDefault` time profile:

1. In DMA, open the `Statistical Parameters` folder.
2. Right-click the `Time Profile` folder and select `New` in the shortcut menu that appears.
3. In the `Time Profile Constructor` dialog box, name the time profile. For this sample environment, we name this profile `CollectorDefault`.
4. In the `Increment` list box, type `15` minutes as shown in the figure to the right. Leave the `Reset Time` at `0:00` (midnight).



5. Click the green check mark button to the right of the `Increment` box, to move the expression to the `Operand Pool`.
6. Click the second green check mark button, above the `Increment` box, to move the expression to the `Definition` box.
7. Click `OK`.

Data Sourcer adds this definition to both Configuration Server and ODS. You can specify a different time profile if you want Stat Server to feed data to Data Sourcer at intervals other than 15 minutes, but make sure that the time profile that you set up represents an integral fraction of an hour. Refer to "How ETL Runtime Aggregates Data" in the *Reporting 7.6 ETL Runtime User's Guide* for further information.

Real-Time Time Profile

The Genesys-provided, real-time reports use different time profiles for some metrics. For most, however, they use Stat Server's internally defined `Default` time profile, which uses a `Growing` interval type that resets statistics every night at midnight. Genesys recommends that you use this time profile for real-time, custom-media metrics, but if you wish to use one or more different profiles, complete the following steps:

1. In Configuration Manager, open the properties of your Stat Server `Application` object.
2. On the `Options` tab, create a new section, name it `TimeProfiles`, and click `OK`.
3. Open the section, and provide a name and value for each time profile that you want to create.

Stage 2: Create CCPulse+ Templates

After you have created the statistical parameters as described in the previous section, you can create real-time templates within CCPulse+. (You must create those parameters first, because you cannot create them within CCPulse+.)

To continue with the CMIxn example, we shall create the CM1 Queue Handling template:

1. Restart your CCPulse+ session, if it is already running.

   Restarting CCPulse+ will pick up any recent parameter additions and changes made in Configuration Server.

2. In CCPulse+, open the Template Wizard. This Wizard contains three screens:
   - Template Definition
   - Pre-defined Statistics
   - Graph

3. On the Template Definition page:
   a. Select the appropriate object type in the Available Object Types frame. For this example, we use the Interaction Queue object type.

      Note: Interaction Queue is CCPulse+'s alias for the StagingArea object type.

   b. In the Options frame, select Create new template and click Next.

4. On the Pre-defined Statistics page:
   a. In the Template Name box, type a unique name. For this example, we name the template CM1 Queue Handling, based on the <MD> Queue Handling template (defined on page 103.)
   b. For each logical grouping of statistics, click New Group under the Requested Statistics frame, and name the group appropriately. This example adds two statistical groups: Total Number and Current Number.
   c. In the Available Statistics frame, select the desired stat type, and move it under the appropriate statistical group in the Requested Statistics frame.

   Note: The desired stat type might not be available if you did not previously add it to the configuration of your Stat Server Application object in Configuration Server. Furthermore, Genesys recommends that you do not directly use the 14 native Java classes that are provided in the Java extension (such as eServiceInteraction Stat.jar:OMQ Current in Queue) to build metrics.

   For this example, we move the CM1_Total_Entered_Queue, CM1_Total_Moved_From_Queue, and CM1_Stopped_Processing_Queue stat types to the Total Number statistical group and rename them Entered, Moved, and Stopped Processing, respectively.

   Under the Current Number statistical group, we move and rename the following five stat types:
   - CM1_Current_In_Queue (renamed In Queue)

- CM1_Current_Waiting_Processing_In_Queue
  (renamed Waiting Processing)
- CM1_Current_In_Processing (renamed In Processing)
- CM1_Maximum_Interactions_In_Queue
  (renamed Maximum Interactions)
- CM1_Minimum_Interactions_In_Queue
  (renamed Minimum Interactions)

Figure 55 illustrates how this page appears after you have completed this step. We see that the CM1_Minimum_interactions_In_ Queue metric is in the processing of being renamed Minimum Interactions.

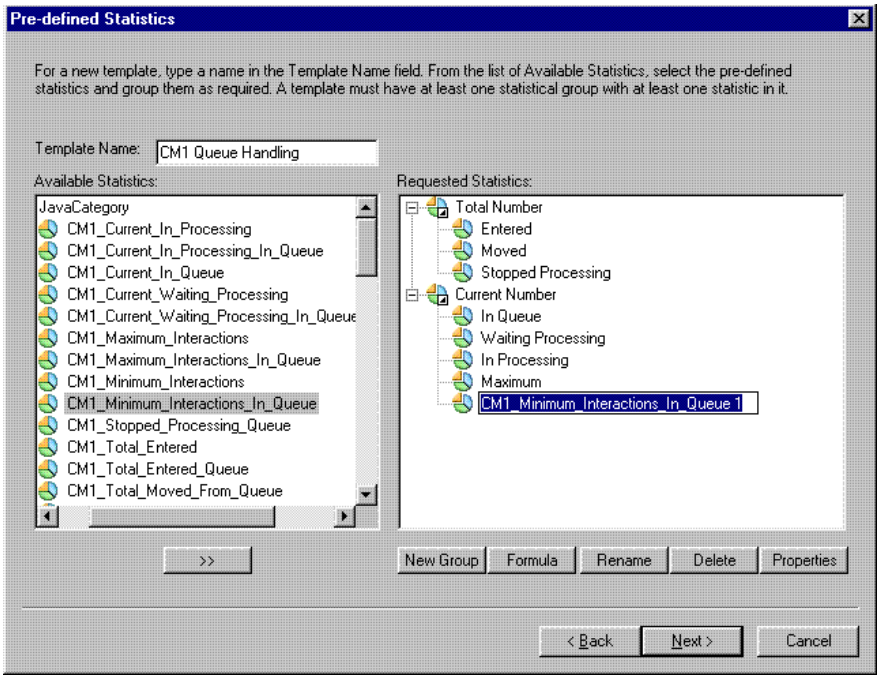


Figure 55: Creating the CM1 Queue Handling CCPulse+ Template

d. For each metric in the Requested Statistics frame, open its properties and set them as defined in "Open Media Real-Time Metrics" on page 104. Click OK to commit your changes. Do not yet specify an historical association, because you have not yet created historical metrics.

Figure 56 illustrates the properties of the Entered metric in this sample environment.

e. Click Next to advance to the final page of the Template Wizard.

5. On the Graph page, configure how graphs are to appear in the CCPulse+ views that you created based on this template, and then click Finish.

6. At the message prompt, click OK.

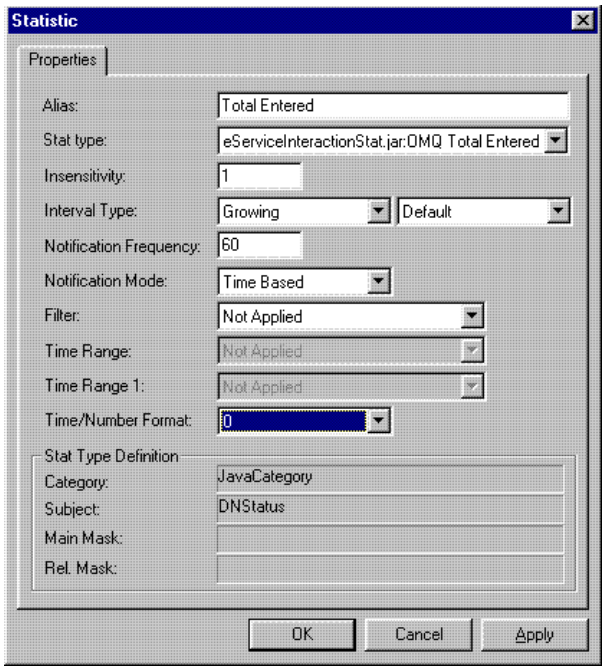


Figure 56: The Entered Metric

7. Repeat Steps 2 through 6 to create the `CM2 Queue Handling` and `CM3 Queue Handling` templates for this sample environment.

   Tip: On the `Template Definition` page (Step 3b), select the `CM1` template that you just created, and click `Create from selected template`. Then, on the `Pre-defined Statistics` page, wherever `CM1` appears, change this to `CM2` (or `CM3`). This method avoids having to repeat many of the time-consuming steps in this procedure.

8. Repeat Steps 2 through 7 for the two remaining CCPulse+ templates, `<Media> Agent Handling` (described on page 103) and `<Media> General Handling` (described on page 103).

   For this sample environment, you should end up with the following nine templates:

`CM1 Queue Handling`	`CM1 Agent Handling`	`CM1 General Handling`
`CM2 Queue Handling`	`CM2 Agent Handling`	`CM2 General Handling`
`CM3 Queue Handling`	`CM3 Agent Handling`	`CM3 General Handling`

Note: The `<Media> Agent Handling` template contains one metric for which you must specify a formula rather than metric properties. On the `Pre-defined Statistics` page, for the `Average Processing Time` metric, select the appropriate statistical group (`Average Time` in this example), click `Formula`, and then type the formula shown in the description of this metric on page 105.

Refer to *Reporting 8.0 CCPulse+ Help* for additional information about operating the Template Wizard.

Stage 3: Create ODS Layout Templates

You use DMA to create layout templates and the historical metrics that constitute them. Layout templates provide the structure for report layouts, which collect the data for specified contact-center objects over a specified interval of time. For the Genesys-recommended open media reports, build the following six layout templates:

- AG_<MD>
- PL_<MD>
- Stage_<MD>
- GA_<MD>
- GP_<MD>
- CC_<MD>

These layout templates are described on pages 112 and 112.

Before you create these layout templates, you must first start (or restart) Data Sourcer after building the stat types appropriate to your media type(s). Starting Data Sourcer copies new statistical parameters to ODS, making them available for you to select when defining the layout templates.

To create a layout template:

1. In DMA, open the Template Creation Wizard. This Wizard contains the following three pages:
   - Common Info
   - Statistics
   - Time Profile
2. On the Common Info page, define the following high-level template attributes, and then click Next:
   a. In the Object Type list box, select the appropriate object type. For this sample environment, we shall first build a layout template whose object type is Staging Area.
   b. In the Template Name box, type a unique name that is 10 characters in length or fewer. For this sample environment, we name this template Stage_CM1.

Note: There are numerous restrictions on the name that you can use for a template. Refer to *Reporting 7.6 Data Modeling Assistant Help* for more information.

   c. In the Layout Name box, type a default name for report layouts that use this layout template as their basis. DMA automatically appends a number to this default report-layout name in order to keep report layouts unique. For this sample environment, we use Stage CM1 as the default name for report layouts that we shall create at "Stage 4: Create Report Layouts" on page 88.

d. (Optional) In the Description box, type a description of this layout template.

3. In the Statistics page, define all of the statistics associated with this layout template, and then click Next:

a. Click New to invoke the Statistic Wizard. You must invoke the Statistic Wizard for each statistic in the layout template.

b. On the StatTypes page of the Statistic Wizard, select the appropriate stat type in the list, and click Next.

To define the N_ENTER_CM1 metric for this example, select CM1_Total_Entered_Queue in the list. Metric definitions for the recommended open media layout templates begin on page 115.

c. If the FilterApplicable check box was checked on the preceding page, on the Filters page, select a filter in the list box, if desired, and click Next.

d. On the Column Info page, type a unique column name for this metric and click Finish. ETL Runtime assigns this name to a column in the Data Mart's R_N_STAT_RES table, and this column name appears in your final reports that use this statistic.

Warning! Data Sourcer cannot validate whether the column name that you specify here already exists in your Data Mart. You yourself must verify its uniqueness. If you do inadvertently designate an already existing name, ETL Runtime will combine this statistic's values with the other's. The column names recommended on pages 115 through 117 do not conflict with the column names reserved for the Genesys-provided reports.

---

e. Repeat Steps a through d for each statistic that must be added to the layout template. The STAGE_CM1 layout template contains the following three statistics, which are based on three statistics in the STAGE_<MD> layout template (described on page 113):

- N_ENTER_CM1
- N_MOVED_CM1
- N_FINPROC_CM1

4. On the Time Profile page, select the time profile that you created on page 81—CollectorDefault for this sample environment. Then, click Finish.

5. Repeat Steps 2 through 4 for the remaining layout templates for one of your custom open media types (CM1, in our example).

6. Repeat Steps 2 through 5 for the remaining custom open media types in your environment (CM2 and CM3, in this sample environment).

In this sample environment, after you have completed these steps, you should have 18 layout templates—6 for each custom open media type. Refer to *Reporting 7.6 Data Modeling Assistant Help* for additional information about using DMA's Template and Statistic Wizards.

Stage 4: Create Report Layouts

Next, you must create and activate report layouts for the new layout templates that you created so that Data Sourcer can begin collecting data.

Creating Report Layouts

1. In DMA, open the Layout Creation Wizard. This Wizard contains five pages:
   - Creation Manner
   - Common Info
   - Objects
   - Statistics
   - Time Profile
2. On the Creation Manner page, click Create Layout using the template, select the desired layout template in the list box, and click Next.
3. On the Common Info page, do the following, and then click Next.
   a. In the Tenants list, select the tenant(s) from which the report layout is to collect data.
   b. (Optional) In the Layout Name box, change the report-layout name that DMA provides. This name must be unique.
   c. (Optional) In the Description box, provide a description of this report layout.

   Note: You cannot edit the value in the Object Types box, because this report layout is based on a layout template.

4. On the Objects page, specify the objects that Data Sourcer will collect, and then click Next:
   a. Indicate whether Data Sourcer is to use all objects in a metagroup you will select or whether you will select objects individually by selecting the appropriate radio button.
   b. In the Tenants/Metagroups list box, select the desired metagroup.
   c. If you chose to select objects individually, in the Object Type list box, select the specific objects.
5. On the Statistics page, click import to import statistics from the layout template to the report layout.

6. On the `Time Profile` page, select the time profile that you created on page 81, and click `Finish`.

Activating Report Layouts

An inactive report layout appears grayed (dimmed) in the DMA interface. To activate it:

1. Right-click the desired inactive report layout in the folder list.
2. Select `Activate` in the shortcut menu that appears.

As soon as the report layout is activated, Data Sourcer begins data collection.

Refer to *Reporting 7.6 Data Modeling Assistant Help* for additional information.

Stage 5: Run the Transformation Module

As you create the layout templates for your environment, DMA writes their definitions to ODS, which is a temporary storage area for historical data. However, this information must be propagated to the Data Mart before it can be available for use in the historical views that you set up in CCPulse+. Running ETL Runtime's Transformation module accomplishes this. If you configured your Data Mart application by using all of the default values, the Transformation module automatically starts every minute after every hour; however, you can manually start this module whenever you wish.

To run ETL Runtime's Transformation module manually, issue the following command from the directory in which ETL Runtime is installed:

```
java -jar transform.jar -conf [properties]
```

where:

`[properties]` is the name of the file that contains a listing of runtime parameters that you can use to effect data transformation (`etl.properties`, by default).

`Note:` There are many runtime parameters that you can set to effect data transformation. Refer to the *Reporting 7.6 ETL Runtime User's Guide* for additional information.

Stage 6: Associate Historical Metrics to Real-Time Metrics

The historical statistics that you created must be propagated to the Data Mart before you can associate them to their real-time equivalents within CCPulse+.

You can perform a cursory check of whether this propagation has occurred by restarting CCPulse+, visiting the `Historical Association` tab of any statistic, and scanning the `Statistic` drop list for any of historical column names that you created.

To assign a historical metric to its real-time equivalent:

1. Restart CCPulse+, if it is currently running.
2. In CCPulse+, invoke the Template Wizard and, on the `Template Definition` page, select one of the CCPulse+ templates that you created in Stage 2 (page 82). Click `Next`.
3. On the `Predefined Statistics` page, open the properties of one statistic in the `Requested Statistics` frame.
4. On the `Historical Association` tab, select the corresponding historical statistic in the `Statistic` list box, and click `OK`. Refer to the historical assignments listed for each metric beginning on page 105. To continue with this example, we assign `N_ENTER_CM1` to the `Entered` metric of the `CM1 Queue Handling` CCPulse+ template, as illustrated in Figure 57.

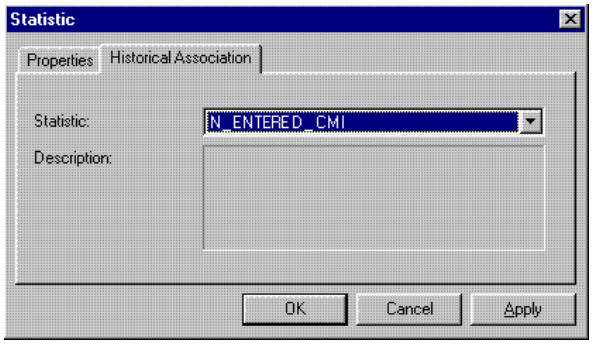


Figure 57: Associating Historical to Real-Time Metrics

5. Repeat Steps 3 and 4 for each metric that can be used for Historical Reporting, and then click `Next`.

   The *CM1 Queue Handling* CCPulse+ template contains eight metrics; however, only three of them are historical in nature. These are the following:

   - `Total Entered`
   - `Total Moved`
   - `Stopped Processing`

6. On the `Graph` page, click `Finish`.
7. Repeat Steps 2 through 6, for each CCPulse+ template that you created.

Open Media Statistical Parameters

The forms in this section describe the filters and time profiles that you should create for your open media environment.

Form Title The name of the statistical parameter. This name provides the key for parameters by using key-value pairs. The `<Media>` filter, below, represents the short name of your custom media type.

Parameter Type One of two values:

- `Filter`
- `TimeProfile`

Stat type parameters that are used for Historical and Real-Time Reporting are described in the *Solution Reporting Templates* book of the *Reporting Technical Reference* series.

Definition The definition of the parameter, as stored in Stat Server and ODS.

Description A brief description of the parameter.

CollectorDefault

Parameter Type	Definition
TimeProfile	0:00+0:15
Description	
This time profile uses a Growing interval type that resets statistics to 0 every 15 minutes. Real-Time Reporting does not use this time profile.	

Default

Parameter Type	Definition
TimeProfile	0:00
Description	
This time profile uses a Growing interval type that resets statistics every night at midnight. This time profile is hard-coded in Stat Server and does not appear in any of the Reporting configuration files, such as StatProfile.cfg (used most prominently by the solutions that offer CCPulse+ templates). You can override this definition by creating a time profile named Default within your Stat Server application. By default, Historical Reporting does not use this time profile.	

<Media>

Parameter Type	Definition
FIlter	PairExist(MediaType="*MediaTypeName*") For example, the definition of the CM1 filter could be PairExist(MediaType="CM1")
Description	
This filter returns values only when the MediaType parameter matches what you have defined for the particular media filter.	

Open Media Stat Types

The forms in this section describe the core and extension stat types that you should create for your open media environment.

Form Title The name of the statistical type. <MD> is used to represent the abbreviated name of your custom media type.

Main Mask Lists the actions or statuses that Stat Server uses in this statistic's calculation. For example, the CallAnswered mask, in concert with the DNAction subject instructs Stat Server to measure answered voice (DN) interactions. One or more main masks must be specified for each stat type.

Relative Mask Provides an additional list of actions to calculate the statistic (a variable in the statistic category formula). Relative mask specification is optional. Refer to "RelMask" section in the *Overview* book of the *Reporting Technical Reference* series for a more detailed explanation.

Aggregation Type Applicable only if the JavaSubCategory field points to a Java Extension. The Java aggregation types employed in Reporting include:

- Current
- Maximum
- Minimum
- Total

Category Specifies the rule Stat Server uses to aggregate statistics. For instance, for the Interactions_Processed stat type, Stat Server is to sum the number of calls processed to arrive at a total number (TotalNumber). One, and only one, category must be specified for each stat type. Valid values for open media stat types include the following:

- CurrentNumber
- TotalNumber
- TotalTime
- JavaCategory

Subject All open media core stat types use the Action subject.

JavaSubCategory Applicable only if the value that is specified in the Category field is JavaCategory. The value in the JavaSubCategory field indicates the name of a Java extension (eServiceInteractionStat.jar) and the Java class that is used therein—for example, OMQ Current in Queue. If no Java extension is indicated, this value reads N/A, for "not applicable".

Object Type(s) Lists the device objects to which Stat Server actions (main masks) can be applied. For example, the Accepted action can be applied to the Agent, GroupAgents, GroupPlaces, and Place objects for the Interactions_Accepted stat type in order to measure the calls that are accepted by a specified agent, a

specified place, a specified group of agents, or a specified group of places. One or more object types must be specified for each stat type.

MediaType The name of the custom media type that you create for your custom-media environment.

Similarly Named Stat Types Lists stat types that are used by the Genesys-provided sample templates for open media and Genesys-provided reports, and that have the same or similar names as suggested to use for the open media custom stat types.

Description Provides a general description of what a statistic that is defined by using this stat type measures. This section also lists differences in definitions throughout the releases.

Introduced In Identifies the GA release in which this stat type was first introduced.

Discontinued In Identifies the first GA release in which this stat type was no longer used in Genesys-provided solution reports. This does not necessarily mean that the stat type is no longer available. If a stat type is still available, this value reads `N/A`, for "not applicable".

Formula Indicates whether the stat type is distinguishable by connection ID. If so, DCID appears. If not, `N/A` denotes "not applicable".

Used in Which Reporting Application One or both of the following:

- `Historical Reporting`
- `Real-Time Reporting`

Current_Interactions_In_Processing

MainMask		Description	
InteractionHandling		The total number of interactions being handled by this resource at the moment of measurement. Use this stat type only for real-time metrics.	
Category: CurrentNumber	Subject: Action		
Object Type(s): Agent, GroupAgents, GroupPlaces, Place			
MediaType: N/A	Similarly Named Stat Types: Current_Interactions_In_Processing		
Introduced In: 7.1	Discontinued In: N/A	Formula: N/A	Used in Which Reporting Application: Real-Time Reporting

Inbound_Interactions_Stopped

MainMask		Description	
InteractionStoppedInbound		The total number of inbound interactions that were terminated by this resource during the specified period.	
Category: TotalNumber	Subject: Action		
Object Type(s): Agent, GroupAgents, GroupPlaces, Place			
MediaType: N/A	Similarly Named Stat Types: Inbound_Interactions_Stopped		
Introduced In: 7.1	Discontinued In: N/A	Formula: N/A	Used in Which Reporting Application: Real-Time Reporting, Historical Reporting

Interactions_Accepted

MainMask		Description	
InteractionAccepted		The total number of interactions that were offered for processing to the resource, and that were accepted during the specified period.	
Category: TotalNumber	Subject: Action		
Object Type(s): Agent, GroupAgents, GroupPlaces, Place			
MediaType: N/A	Similarly Named Stat Types: Interactions_Accepted		
Introduced In: 7.1	Discontinued In: N/A	Formula: N/A	Used in Which Reporting Application: Real-Time Reporting, Historical Reporting

Interactions_Offered

MainMask		Description	
InteractionDeliveringStarted		The total number of interactions that were offered for processing to this resource during the specified period.	
Category: TotalNumber	Subject: Action		
Object Type(s): Agent, GroupAgents, GroupPlaces, Place			
MediaType: N/A	Similarly Named Stat Types: Interactions_Offered		
Introduced In: 7.1	Discontinued In: N/A	Formula: N/A	Used in Which Reporting Application: Real-Time Reporting, Historical Reporting

Interactions_Processed

MainMask		Description	
InteractionHandlng		The total number of interactions that were handled by this resource during the specified period.	
Category: TotalNumber	Subject: Action		
Object Type(s): Agent, GroupAgents, GroupPlaces, Place			
MediaType: N/A	Similarly Named Stat Types: Interactions_Processed		
Introduced In: 7.1	Discontinued In: N/A	Formula: N/A	Used in Which Reporting Application: Real-Time Reporting, Historical Reporting

Interactions_Processing_Time

MainMask		Description	
InteractionHandling		The total amount of time that this resource spent handling interactions during the specified period.	
Category: TotalTiime	Subject: Action		
Object Type(s): Agent, GroupAgents, GroupPlaces, Place			
MediaType: N/A	Similarly Named Stat Types: Interactions_Processing_Time		
Introduced In: 7.1	Discontinued In: N/A	Formula: N/A	Used in Which Reporting Application: Real-Time Reporting, Historical Reporting

Interactions_Rejected

MainMask		Description	
InteractionRejected		The total number of interactions that were offered for processing to this resource, and that were rejected, during the specified period.	
Category: TotalNumber	Subject: Action		
Object Type(s): Agent, GroupAgents, GroupPlaces, Place			
MediaType: N/A	Similarly Named Stat Types: Interactions_Rejected		
Introduced In: 7.1	Discontinued In: N/A	Formula: N/A	Used in Which Reporting Application: Real-Time Reporting, Historical Reporting

Interactions_Timed_Out

MainMask		Description	
InteractionRevoked		The total number of interactions that were accepted, pulled, or created and subsequently revoked by this resource because of prolonged non-activity during the specified period.	
Category: TotalNumber	Subject: Action		
Object Type(s): Agent, GroupAgents, GroupPlaces, Place			
MediaType: N/A	Similarly Named Stat Types: Interactions_Timed_Out		
Introduced In: 7.1	Discontinued In: N/A	Formula: N/A	Used in Which Reporting Application: Real-Time Reporting, Historical Reporting

<MD>_Current_In_Processing

MainMask		Description
N/A		The total number of interactions of the specified media type that have been submitted within the contact center (for single-tenant environments) or within the specified tenant (for multi-tenant environments) and that are currently in processing. Use this stat type only for real-time metrics. **Note:** You must have the eServiceInteraction Stat Server Java Extension loaded in order to use this stat type.
Category JavaCategory	Subject N/A	
Object Type(s) Tenant		

MediaType	Similarly Named Stat Types
Specify your media.	Current_Interaction_In_Processing Current_Interactions_In_Processing

Introduced In	Discontinued In	Formula	Used in Which Reporting Application
7.1	N/A	N/A	Real-Time Reporting

<MD>_Current_In_Processing_In_Queue

MainMask		Description
N/A		The total number of interactions of the specified media type that have been submitted to this staging area and that are currently in processing. Use this stat type only for real-time metrics. **Note:** You must have the eServiceInteraction Stat Server Java Extension loaded in order to use this stat type.
Category JavaCategory	Subject N/A	
Object Type(s) StagingArea		

MediaType	Similarly Named Stat Types
Specify your media.	Current_Interaction_In_Processing Current_Interactions_In_Processing MediaX_Current_In_Processing_In_Queue

Introduced In	Discontinued In	Formula	Used in Which Reporting Application
7.1	N/A	N/A	Real-Time Reporting

<MD>_Current_In_Queue

MainMask		Description
N/A		The total number of interactions of the specified media type within this staging area at the moment of measurement. Use this stat type only for real-time metrics. **Note:** You must have the eServiceInteraction Stat Server Java Extension loaded in order to use this stat type.
Category JavaCategory	Subject N/A	
Object Type(s) StagingArea		

MediaType	Similarly Named Stat Types	
Specify your media.	Current_In_Queue	MediaX_Current_In_Queue

Introduced In	Discontinued In	Formula	Used in Which Reporting Application
7.1	N/A	N/A	Real-Time Reporting

<MD>_Current_Waiting_Processing

MainMask		Description
N/A		The total number of interactions of the specified media type that have been submitted within the contact center (for single-tenant environments) or within the specified tenant (for multi-tenant environments), and that are currently awaiting processing. Use this stat type only for real-time metrics. **Note:** You must have the eServiceInteraction Stat Server Java Extension loaded in order to use this stat type.
Category: JavaCategory	Subject: N/A	
Object Type(s): Tenant		
MediaType: *Specify your media.*	Similarly Named Stat Types: Chat_Current_Waiting, IxnQueue_Email_Waiting_Processing, General_Email_Waiting_Processing	
Introduced In: 7.1	Discontinued In: N/A	Formula: N/A / Used in Which Reporting Application: Real-Time Reporting

<MD>_Current_Waiting_Processing_In_Queue

MainMask		Description
N/A		The total number of interactions of the specified media type that have been submitted to this staging area and that are currently awaiting processing. Use this stat type only for real-time metrics. **Note:** You must have the eServiceInteraction Stat Server Java Extension loaded in order to use this stat type.
Category: JavaCategory	Subject: N/A	
Object Type(s): StagingArea		
MediaType: *Specify your media.*	Similarly Named Stat Types: General_Email_Waiting_Processing, IxnQueue_Email_Waiting_Processing, MediaX_Current_Waiting_Processing_In_Queue	
Introduced In: 7.1	Discontinued In: N/A	Formula: N/A / Used in Which Reporting Application: Real-Time Reporting

<MD>_Maximum_Interactions

MainMask		Description
N/A		The maximum number of interactions of the specified media type that either were awaiting processing or were in processing within the contact center (for single-tenant environments) or within the specified tenant (for multi-tenant environments) during the specified period. Use this stat type only for real-time metrics. **Note:** You must have the eServiceInteraction Stat Server Java Extension loaded in order to use this stat type.
Category: JavaCategory	Subject: N/A	
Object Type(s): Tenant		
MediaType: *Specify your media.*	Similarly Named Stat Types: Maximum_Calls Ixn, Queue_Email_Maximum, General_Email_Maximum	
Introduced In: 7.1	Discontinued In: N/A	Formula: N/A / Used in Which Reporting Application: Real-Time Reporting

<MD>_Maximum_Interactions_In_Queue

MainMask		Description
N/A		The maximum number of interactions of the specified media type that either were awaiting processing or were in processing within this staging area during the specified period. Use this stat type only for real-time metrics. **Note:** You must have the eServiceInteraction Stat Server Java Extension loaded in order to use this stat type.
Category: JavaCategory	Subject: N/A	
Object Type(s): StagingArea		
MediaType: *Specify your media.*	Similarly Named Stat Types: General_Email_Maximum, IxnQueue_Email_Maximum, Maximum_Calls, MediaX_Maximum_Interactions_In_Queue	

Introduced In	Discontinued In	Formula	Used in Which Reporting Application
7.1	N/A	N/A	Real-Time Reporting

<MD>_Minimum_Interactions

MainMask		Description
N/A		The minimum number of interactions of the specified media type that were either waiting processing or were in processing within the contact center (for single-tenant environments) or within the specified tenant (for multi-tenant environments) within the specified period. **Note:** You must have the eServiceInteraction Stat Server Java Extension loaded in order to use this stat type.
Category: JavaCategory	Subject: N/A	
Object Type(s): Tenant		
MediaType: *Specify your media.*	Similarly Named Stat Types: General_Email_Maximum, IxnQueue_Email_Minimum, Minimum_Calls	

Introduced In	Discontinued In	Formula	Used in Which Reporting Application
7.1	N/A	N/A	Real-Time Reporting

<MD>_Minimum_Interactions_In_Queue

MainMask		Description
N/A		The minimum number of interactions of the specified media type that were either waiting processing or in processing within this staging area within the specified period. **Note:** You must have the eServiceInteraction Stat Server Java Extension loaded in order to use this stat type.
Category: JavaCategory	Subject: N/A	
Object Type(s): StagingArea		
MediaType: *Specify your media.*	Similarly Named Stat Types: General_Email_Maximum, IxnQueue_Email_Minimum, Minimum_Calls, MediaX_Minimum_Interactions_In_Queue	

Introduced In	Discontinued In	Formula	Used in Which Reporting Application
7.1	N/A	N/A	Real-Time Reporting

<MD>_Stopped_Processing_Queue

MainMask		Description	
N/A		The total number of interactions of the specified media type that stopped processing while in this staging area during the specified period. **Note:** You must have the eServiceInteraction Stat Server Java Extension loaded in order to use this stat type.	
Category JavaCategory	Subject N/A		
Object Type(s) StagingArea			
MediaType *Specify your media.*	Similarly Named Stat Types MediaX_Stopped_Processing_In_Queue		
Introduced In 7.1	Discontinued In N/A	Formula N/A	Used in Which Reporting Application Real-Time Reporting, Historical Reporting

<MD>_Total_Entered

MainMask		Description	
N/A		The total number of interactions of the specified media type that entered through all entry points within the contact center (for single-tenant environments) or within the specified tenant (for multi-tenant environments) during the specified period. **Note:** You must have the eServiceInteraction Stat Server Java Extension loaded in order to use this stat type.	
Category JavaCategory	Subject N/A		
Object Type(s) Tenant			
MediaType *Specify your media.*	Similarly Named Stat Types CallsEntered Chat_Total_Entered	General_Email_Entered IxnQueue_Email_Entered	Total_Calls_Entered Total_Entered
Introduced In 7.1	Discontinued In N/A	Formula N/A	Used in Which Reporting Application Real-Time Reporting, Historical Reporting

<MD>_Total_Entered_Queue

MainMask		Description	
N/A		The total number of interactions of the specified media type that entered this staging area during the specified period. **Note:** You must have the eServiceInteraction Stat Server Java Extension loaded in order to use this stat type.	
Category JavaCategory	Subject N/A		
Object Type(s) StagingArea			
MediaType *Specify your media.*	Similarly Named Stat Types Chat_Total_Entered MediaX_Total_Entered_Queue	Total_Calls_Entered Total_Entered	
Introduced In 7.1	Discontinued In N/A	Formula N/A	Used in Which Reporting Application Real-Time Reporting, Historical Reporting

<MD>_Total_Moved_From_Queue

MainMask		Description	
N/A		The total number of interactions of the specified media type that were moved from this staging area to any other staging area during the specified period. **Note:** You must have the eServiceInteraction Stat Server Java Extension loaded in order to use this stat type.	
Category JavaCategory	Subject N/A		
Object Type(s) StagingArea			
MediaType *Specify your media.*	Similarly Named Stat Types IxnQueue_Email_Moved MediaX_Total_Moved_From_Queue		
Introduced In 7.1	Discontinued In N/A	Formula N/A	Used in Which Reporting Application Real-Time Reporting, Historical Reporting

<MD>_Total_Transfers

MainMask		Description	
N/A		The total number of times that interactions of the specified media type were transferred within the contact center (for single-tenant environments) or within the specified tenant (for multi-tenant environments) during the specified period. **Note:** You must have the eServiceInteraction Stat Server Java Extension loaded in order to use this stat type.	
Category JavaCategory	Subject N/A		
Object Type(s) Tenant			
MediaType *Specify your media.*	Similarly Named Stat Types Transfers_Made Transfers_Taken	Chat_Total_Transfers General_Email_Transfers	
Introduced In 7.1	Discontinued In N/A	Formula N/A	Used in Which Reporting Application Real-Time Reporting, Historical Reporting

Total_NumberI_Transfers_Made

MainMask		Description	
InteractionTransferMade		The total number of transfers made by this resource during the specified period.	
Category TotalNumber	Subject Action		
Object Type(s) Agent, GroupAgents, GroupPlaces, Place			
MediaType N/A	Similarly Named Stat Types Transfers_Made		
Introduced In 7.1	Discontinued In N/A	Formula N/A	Used in Which Reporting Application Real-Time Reporting, Historical Reporting

Open Media CCPulse+ Templates

The forms in this section describe the CCPulse+ templates that you should create for your open media environment.

Form Title The name of the CCPulse+ template. `<MD>` is used to represent the abbreviated name of your custom media type.

Solution Identifies the Genesys products that provide the template.

Introduced In Identifies the GA release in which this template was first introduced.

Discontinued In Identifies the first GA release in which this template was no longer available. Where a template is still available, this value reads `N/A`, for "not applicable".

Statistical Groups and Statistics Lists all statistics defined to each template and their statistical grouping. For example, in the `<MD> Queue Handling` template, `Total Number` is the statistical group and `Entered`, `Moved`, and `Stopped Processing` are the statistics that belong to that group.

Description Provides a synopsis of what a generated view that is based on this template conveys. This field also describes some general metrics changes that occurred between releases.

<MD> Queue Handling

Solution	Introduced In	Discontinued In
	7.1	N/A

Total Number	Current Number
Entered Moved Stopped Processing	In Queue Waiting Processing In Processing Maximum Interactions Minimum Interactions

Description

Collects metrics related to the number of interactions of a specific media type that are processed within a staging area.

<MD> Agent Handling

Solution	Introduced In	Discontinued In
	7.1	N/A

Total Number	Current Number	Total Time	Average Time
Offered Accepted Rejected Terminated Transferred Timed Out Finished Processing	In Processing	Processing Time	Average Processing Time

Description

Collects metrics related to the number of interactions of a specific media type that an agent, place, or group thereof processes.

<MD> General Handling

Solution	Introduced In	Discontinued In
	7.1	N/A

Total Number	Current Number
Entered Transferred	Maximum Interactions Minimum Interactions In Processing Waiting Processing

Description

Collects metrics related to the number of interactions of a specific media type that are processed within the contact center (for a single-tenant environment) or within a specific tenant (for multi-tenant environments).

Open Media Real-Time Metrics

The forms in this section describe the real-time metrics that you should create for your open media environment. Real-time metrics are defined by the stat types on which they are built, and by a filter, if applied. Refer to "Open Media Statistical Parameters" on page 91 for the definitions and descriptions of the filters that are used.

Form Title The alias name of the CCPulse+ metric.

Stat Type Identifies the Stat Server statistical type that this metric obeys. The Stat Type definition fields cannot be edited; they display the four options that define the statistical type in the configuration of Stat Server.

Statistical Group Lists the statistical grouping under which the metric falls.

Solution Identifies the Genesys products that measure and report on values for this metric.

Notification Frequency Defines how often, in seconds, Stat Server should recalculate the metric and notify CCPulse+ if the metric has changed by more than the specified insensitivity.

Insensitivity Describes a condition for receiving an update of a metric value for an object monitored in the view.

Filter Identifies the filter applied to this metric.

Time Range N/A for this release of open media templates.

Time Range 1 N/A for this release of open media templates.

Interval Type Defines the time profile for this metric.

Time Profile Identifies the name of the time profile as specified in the `TimeProfiles` section of the supporting Stat Server `Application` object. Time profiles specify the interval over which historical aggregate values are calculated.

Format Defines the time or number format for the metric. Either `hh:mm:ss` or `0`.

Introduced In Identifies the GA release in which this metric was first introduced.

Discontinued In Identifies the first GA release in which this metric was no longer available. If a metric is still available, this value reads `N/A`, for "not applicable".

Historical Association The comparable metric found in the Data Mart. Click this value to read more information about the historical metric. This value reads `N/A` if this metric has no historical equivalent.

Calling Template The CCPulse+ template(s) in which this metric can be found.

Description Provides a general description of what a report that uses this metric measures.

Accepted

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
Interactions_Accepted	Total Number		10 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
<Media>	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N_ACCEPT_<MD>	This metric represents the total number of interactions of the specified media type that were offered for processing to an agent, a place, or group thereof and that were accepted during a specific time period.
Calling Template	
<MD> Agent Handling	

Average Processing Time

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
N/A	Average Time		N/A	N/A

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
N/A	N/A	N/A	N/A	N/A	hh:mm:ss	7.1	N/A

Historical Association	Description
N/A	This metric represents the average amount of time that an agent, place, or group thereof spent handling interactions. CCPulse+ calculates this metric from the values of the Processing Time and Finished Processing CCPulse+ metrics using this formula: `ccpulse.group("Total Time").statistic("Processing Time") / ccpulse.group("Total Number").statistic("Finished Processing")`
Calling Template	
<MD> Agent Handling	

Entered[1]

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
<MD>_Total_Entered_Queue	Total Number		60 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
N/A	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N_ENTER_<MD>	This metric represents the total number of interactions of a specific media type that entered a staging area during a specific time period.
Calling Template	
<MD> Queue Handling	

Entered[2]

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
<MD>_Total_Entered	Total Number		60 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
N/A	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N_ENTERCC_<MD>	This metric represents the total number of interactions of a specific media type that entered from all entry points during a specific time period.
Calling Template	
<MD> General Handling	

Finished Processing

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
Interactions_Processed	Total Number		10 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
<Media>	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N_PROCESS_<MD>	This metric represents the total number of interactions handled by an agent, a place, or group thereof during a specific time period.
Calling Template	
<MD> Agent Handling	

In Processing[1]

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
Current_Interactions_In_Processing	Current Number		2 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
<Media>	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N/A	This metric represents the current number of interactions of a particular media type that were offered for processing to an agent, a place, or group thereof during a specific time period.
Calling Template	
<MD> Agent Handling	

In Processing[2]

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
<MD>_Current_In_Processing_In_Queue	Current Number		60 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
N/A	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N/A	This metric represents the total number of interactions of a particular media type that have been submitted and that are currently in processing.
Calling Template	
<MD> Queue Handling	

In Processing[3]

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
<MD>_Current_In_Processing	Current Number		60 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
N/A	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N/A	This metric represents the total number of interactions of a particular media type that have been submitted within the contact center (for single-tenant environments) or within the specified tenant (for multi-tenant environments) and that are currently in processing.
Calling Template	
<MD> General Handling	

In Queue

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
<MD>_Current_In_Queue	Current Number		60 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
N/A	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N/A	This metric represents the current number of interactions of a particular media type in a queue.
Calling Template	
<MD> Queue Handling	

Maximum Interactions[1]

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
<MD>_Maximum_Interactions_In_Queue	Current Number		60 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
N/A	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N/A	This metric represents the maximum number of interactions of a particular media type that were either waiting processing or in were processing during a specific time period.
Calling Template	
<MD> Queue Handling	

Maximum Interactions[2]

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
<MD>_Maximum_Interactions	Current Number		60 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
N/A	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N/A	This metric represents the maximum number of interactions of a particular media type that were either waiting processing or were in processing during a specific time period.
Calling Template	
<MD> General Handling	

Minimum Interactions[1]

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
<MD>_Minimum_Interactions_In_Queue	Current Number		60 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
N/A	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N/A	This metric represents the minimum number of interactions of a particular media type that either were awaiting processing or were in processing within a specific queue during a specific time period.
Calling Template	
<MD> Queue Handling	

Minimum Interactions[2]

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
<MD>_Minimum_Interactions	Current Number		60 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
N/A	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N/A	This metric represents the minimum number of interactions of a particular media type that either were awaiting processing or were in processing within the contact center (for single-tenant environments) or within a specific tenant (for multi-tenant environments) during a specific time period.
Calling Template	
<MD> General Handling	

Moved

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
<MD>_Total_Moved_From_Queue	Total Number		60 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
N/A	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N_MOVED_<MD>	This metric represents the total number of interactions of a particular media type that were moved from a particular staging area to any other staging area during a specific time period.
Calling Template	
<MD> Queue Handling	

Offered

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
Interactions_Offered	Total Number		10 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
<Media>	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N_OFFERED_<MD>	This metric represents the total number of interactions that were offered for processing to an agent, a place, or group thereof during a specific time period.
Calling Template	
<MD> Agent Handling	

Processing Time

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
Interactions_Processing_Time	Total Time		10 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
<Media>	N/A	N/A	Growing	Default	hh:mm:ss	7.1	N/A

Historical Association	Description
T_PROCTIME_<MD>	This metric represents the total amount of time that an agent, place, or group thereof spent handling interactions during a specific time period.
Calling Template	
<MD> Agent Handling	

Rejected

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
Interactions_Rejected	Total Number		10 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
<Media>	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N_REJECT_<MD>	This metric represents the total number of interactions that were offered for processing to this resource and that were rejected during the specified period.
Calling Template	
<MD> Agent Handling	

Stopped Processing

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
<MD>_Stopped_Processing_Queue	Total Number		60 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
N/A	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N_FINPROC_<MD>	This metric represents the total number of interactions of a particular media type that stopped processing during a specific time period.
Calling Template	
<MD> Queue Handling	

Terminated

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
Inbound_Interactions_Stopped	Total Number		10 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
<Media>	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N_TERM_<MD>	This metric represents the total number of inbound interactions that were terminated by an agent, a place, or group thereof during a specific time period.
Calling Template	
<MD> Agent Handling	

Timed Out

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
Interactions_Timed_Out	Total Number		10 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
<Media>	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N_TIMEOUT_<MD>	This metric represents the total number of interactions that were accepted, pulled, or created, and subsequently revoked by an agent, place, or group thereof because of prolonged non-activity during a specific time period.
Calling Template	
<MD> Agent Handling	

Transferred[1]

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
Total_Numberl_Transfers_Made	Total Number		10 seconds	

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
<Media>	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N_TRNSFRD_<MD>	This metric represents the total number of transfers made by an agent, a place, or group thereof during a specific time period.
Calling Template	
<MD> Agent Handling	

Transferred[2]

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
<MD>_Total_Transfers	Total Number		60 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
N/A	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N_TRNFRCC_<MD>	This metric represents the total number of times that interactions of a particular media type were transferred within the contact center (for single-tenant environments) of within the tenant (for multi-tenant environments) during a specific time period.
Calling Template	
<MD> General Handling	

Waiting Processing[1]

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
<MD>_Current_Waiting_Processing_In_Queue	Current Number		60 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
N/A	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N/A	This metric represents the total number of interactions of a particular media type that have been submitted to the staging area and that are currently awaiting processing.
Calling Template	
<MD> Queue Handling	

Waiting Processing[2]

Stat Type	Statistical Group	Solution	Notification Frequency	Insensitivity
<MD>_Current_Waiting_Processing	Current Number		60 seconds	1

Filter	Time Range	Time Range 1	Interval Type	Time Profile	Format	Introduced In	Discontinued In
N/A	N/A	N/A	Growing	Default	0	7.1	N/A

Historical Association	Description
N/A	This metric represents the total number of interactions of a particular media type that have been submitted within the contact center (for single-tenant environments) or within a specific tenant (for multi-tenant environments), and are that currently awaiting processing.
Calling Template	
<MD> General Handling	

Open Media ODS Layout Templates

The forms in this section describe the historical layout templates that you should create for your open media environment. ODS layout template names must be unique. Furthermore, they are restricted to 10 characters in length. The layout template names in this section do not conflict with the names of layout templates used in the Genesys-provided reports.

Form Title The name of the ODS layout template. `<MD>` is used to represent the abbreviated name of your custom media type.

Object Type Displays the object type to which this layout template applies.

Default Report Layout Name Shows the name that Data Sourcer assigns to report layouts that are based on this layout template. If you set Data Sourcer to automatically generate report layouts, Data Sourcer adds a unique number to the default report layout name, so that you can easily identify it. Data Modeling Assistant also uses this Data Sourcer–assigned default name, but you can change this name as desired.

Number of Statistics A count of the statistics listed under Stat Column Name. This number is useful in verifying proper configuration.

Stat Column Name A listing of the column names that appear in the`Stat Result` tables of the Data Mart for folder templates that are based on this ODS layout template. Click any item in this field to read information about the corresponding statistic.

Description Briefly describes what data a report layout that is based on this layout template collects.

Based in Which Source One of the following:

- `Stat Server`
- `Stat Server Java Extension`

Current Version The version number of the specific layout template.

Introduced In Identifies the GA release in which this layout template was first introduced.

Discontinued In Identifies the first GA release in which this template was no longer available. If a template is still available, this value reads `N/A`, for “not applicable”.

AG_<MD>

Object Type	Default Report Layout Name	Number of Statistics
Agent	<Media> Agent Layout	8

Stat Column Name			
N_ACCEPT_<MD>	N_PROCESS_<MD>	N_TERM_<MD>	N_TRNSFRD_<MD>
N_OFFERED_<MD>	N_REJECT_<MD>	N_TIMEOUT_<MD>	T_PROCTIME_<MD>

Description	Based in Which Source
Specifies the metrics to be collected for agents handling interactions of a particular media type.	Stat Server

Current Version	Introduced In	Discontinued In
7.2	7.1	N/A

CC_<MD>

Object Type	Default Report Layout Name	Number of Statistics
Tenant	<Media> Tenant Layout	2

Stat Column Name	
N_ENTERCC_<MD>	N_TRNFRCC_<MD>

Description	Based in Which Source
Specifies metrics that provide the total number of interactions of a particular media type that entered, left, or were completed within a contact center (for single-tenant environments) or within a specific tenant (for multi-tenant environments).	Stat Server Java Extension

Current Version	Introduced In	Discontinued In
7.2	7.1	N/A

GA_<MD>

Object Type	Default Report Layout Name	Number of Statistics
Group of Agents	<Media> Agent Group Layout	8

Stat Column Name			
N_ACCEPT_<MD>	N_PROCESS_<MD>	N_TERM_<MD>	N_TRNSFRD_<MD>
N_OFFERED_<MD>	N_REJECT_<MD>	N_TIMEOUT_<MD>	T_PROCTIME_<MD>

Description	Based in Which Source
Specifies the metrics to be collected for a group of agents handling interactions of a particular media type.	Stat Server

Current Version	Introduced In	Discontinued In
7.2	7.1	N/A

GP_<MD>

Object Type	Default Report Layout Name	Number of Statistics
Group of Places	<Media> Place Group Layout	8

Stat Column Name			
N_ACCEPT_<MD>	N_PROCESS_<MD>	N_TERM_<MD>	N_TRNSFRD_<MD>
N_OFFERED_<MD>	N_REJECT_<MD>	N_TIMEOUT_<MD>	T_PROCTIME_<MD>

Description	Based in Which Source
Specifies the metrics to be collected for a group of places in which interactions of a particular media type are handled.	Stat Server

Current Version	Introduced In	Discontinued In
7.2	7.1	N/A

PL_<MD>

Object Type	Default Report Layout Name	Number of Statistics
Place	<Media> Place Layout	8

Stat Column Name			
N_ACCEPT_<MD>	N_PROCESS_<MD>	N_TERM_<MD>	N_TRNSFRD_<MD>
N_OFFERED_<MD>	N_REJECT_<MD>	N_TIMEOUT_<MD>	T_PROCTIME_<MD>

Description	Based in Which Source
Specifies the metrics to be collected for a place in which interactions of a particular media type are handled.	Stat Server

Current Version	Introduced In	Discontinued In
7.2	7.1	N/A

STAGE_<MD>

Object Type	Default Report Layout Name	Number of Statistics
StagingArea	<Media> Staging Area Layout	3

Stat Column Name		
N_ENTER_<MD>	N_MOVED_<MD>	N_FINPROC_<MD>

Description	Based in Which Source
Specifies metrics that provide the total number of interactions of a particular media type that entered, left, or were completed within a staging area.	Stat Server Java Extension

Current Version	Introduced In	Discontinued In
7.2	7.1	N/A

Open Media Historical Metrics/Data Mart Metrics

The forms in this section describe the historical metrics that you should create for your open media environment. Historical metrics are defined by the stat types on which they are based, and by a filter, if applied. Refer to "Open Media Statistical Parameters" on page 91 for the definitions and descriptions of the filters used.

Form Title The name of a column in the Data Mart that stores the value of this metric. `<MD>` is used to represent the abbreviated name of your custom media type.

Stat Type Name The name of the stat type on which this metric is based. See the "Statistical Type" section in the *Overview* book of the *Reporting Technical Reference* series for an in-depth discussion of stat types.

Introduced In Identifies the GA release in which this metric was first introduced. All metrics are available in the current release.

Solution The name of the Genesys solution for which this metric can be used.

Description Provides a hyperlink to the "Open Media Stat Types" section, in which the stat type on which this metric is based is fully defined.

Parameter Either `N/A`, for "not applicable" or `<Media>`, designating the name of your custom media type.

Used by the Following ODS Layout Templates Lists the custom ODS layout templates that contain this metric.

N_ACCEPT_<MD>

Stat Type Name	Solution	Introduced In	Parameter
Interactions_Accepted		7.1	Filter: <Media>
Used By The Following ODS Layout Templates			
AG_<MD> GA_<MD> GP_<MD> PL_<MD>			
Description			
Refer to Interactions_Accepted in the “Open Media Stat Types” section for a complete description.			

N_ENTER_<MD>

Stat Type Name	Solution	Introduced In	Parameter
<MD>_Total_Entered_Queue		7.1	N/A
Used By The Following ODS Layout Templates			
STAGE_<MD>			
Description			
Refer to <MD>_Total_Entered_Queue in the “Open Media Stat Types” section for a complete description.			

N_ENTERCC_<MD>

Stat Type Name	Solution	Introduced In	Parameter
<MD>_Total_Entered		7.1	N/A
Used By The Following ODS Layout Templates			
CC_<MD>			
Description			
Refer to <MD>_Total_Entered in the “Open Media Stat Types” section for a complete description.			

N_FINPROC_<MD>

Stat Type Name	Solution	Introduced In	Parameter
<MD>_Stopped_Processing_Queue		7.1	N/A
Used By The Following ODS Layout Templates			
STAGE_<MD>			
Description			
Refer to <MD>_Stopped_Processing_Queue in the “Open Media Stat Types” section for a complete description.			

N_MOVED_<MD>

Stat Type Name	Solution	Introduced In	Parameter
<MD>_Total_Moved_From_Queue		7.1	N/A
Used By The Following ODS Layout Templates			
STAGE_<MD>			
Description			
Refer to <MD>_Total_Moved_From_Queue in the “Open Media Stat Types” section for a complete description.			

N_TRNFRCC_<MD>

Stat Type Name	Solution	Introduced In	Parameter
<MD>_Total_Transfers		7.1	N/A
Used By The Following ODS Layout Templates			
CC_<MD>			
Description			
Refer to <MD>_Total_Transfers in the “Open Media Stat Types” section for a complete description.			

N_OFFERED_<MD>

Stat Type Name	Solution	Introduced In	Parameter
Interactions_Offered		7.1	Filter: <Media>
Used By The Following ODS Layout Templates			
AG_<MD> GA_<MD> GP_<MD> PL_<MD>			
Description			
Refer to Interactions_Offered in the “Open Media Stat Types” section for a complete description.			

N_PROCESS_<MD>

Stat Type Name	Solution	Introduced In	Parameter
Interactions_Processed		7.1	Filter: <Media>
Used By The Following ODS Layout Templates			
AG_<MD> GA_<MD> GP_<MD> PL_<MD>			
Description			
Refer to Interactions_Processed in the “Open Media Stat Types” section for a complete description.			

N_REJECT_<MD>

Stat Type Name	Solution	Introduced In	Parameter
Interactions_Rejected		7.1	Filter: <Media>
Used By The Following ODS Layout Templates			
AG_<MD> GA_<MD> GP_<MD> PL_<MD>			
Description			
Refer to Interactions_Rejected in the “Open Media Stat Types” section for a complete description.			

N_TERM_<MD>

Stat Type Name	Solution	Introduced In	Parameter
Inbound_Interactions_Stopped		7.1	Filter: <Media>
Used By The Following ODS Layout Templates			
AG_<MD> GA_<MD> GP_<MD> PL_<MD>			
Description			
Refer to Inbound_Interactions_Stopped in the “Open Media Stat Types” section for a complete description.			

N_TIMEOUT_<MD>

Stat Type Name	Solution	Introduced In	Parameter
Interactions_Timed_Out		7.1	Filter: <Media>
Used By The Following ODS Layout Templates			
AG_<MD> GA_<MD> GP_<MD> PL_<MD>			
Description			
Refer to Interactions_Timed_Out in the “Open Media Stat Types” section for a complete description.			

N_TRNSFRD_<MD>

Stat Type Name	Solution	Introduced In	Parameter
Total_Numberl_Transfers_Made		7.1	Filter: <Media>
Used By The Following ODS Layout Templates			
AG_<MD> GA_<MD> GP_<MD> PL_<MD>			
Description			
Refer to Total_Numberl_Transfers_Made in the “Open Media Stat Types” section for a complete description.			

T_PROCTIME_<MD>

Stat Type Name	Solution	Introduced In	Parameter
Interactions_Processing_Time		7.1y	Filter: <Media>
Used By The Following ODS Layout Templates			
AG_<MD> GA_<MD> GP_<MD> PL_<MD>			
Description			
Refer to Interactions_Processing_Time in the “Open Media Stat Types” section for a complete description.			

Customizing the Genesys-Provided Sample Media Templates

To provide you with a faster method of creating open media reports, beginning with the release 7.2, Genesys offers on the Reporting Templates CD two sample open media real-time templates:

- `Media X Queue Template`
- `Media X Resource Template`

The `Media X Queue Template` provides data for objects of type `StagingArea` (referred to as `Interaction Queue` in the CCPulse+ interface). The `Media X Resource Template` provides data for agent-related objects, such as agents, agent groups, places, and place groups.

You can review descriptions of these two templates—and the metrics and statistical parameters of which they are composed—in the *Solution Reporting Templates* book of the *Reporting Technical Reference* series. Use instructions in this section to create media-specific templates from the provided samples and build corresponding real-time reports.

Determining Media Name

The media name in your custom templates must match the name that is specified for this media in the Configuration Layer. You must use the exact media for both interaction queue and agent-related reports.

To verify the name of the media for which you are creating open media templates:

1. In Configuration Manager, open the `Business Attributes` > `Media Type` > `Attribute Values` folder under your particular Tenant (in a multi-tenant environment) or under `Resources` (in a single-tenant environment).
2. Open the properties of your `Media Type` object.
3. On the `General` tab, check the `Name` property value and make a note of it. For example, the name that is configured for the Media EMail is `email`.
4. Repeat Steps 2 and 3 for every media type on which you need to report.

Creating an Open Media Report on an Agent

To create an open media report on agent-related objects, such as an agent, group of agents, place, or group of places, you must perform the following major steps:

1. Create a filter for a particular media type, similar to a Genesys-provided Media X filter. (See "Creating a Filter for Your Media" for detailed instructions.)

2. Create a new template that is based on the `Media X Resource Template`. (See "Creating a Resource Template for Your Media" for detailed instructions.)
3. Create a CCPulse+ real-time view that is based on the template that you created for the particular media. (See "Creating an Agent-Based Report" on page 120 for detailed instructions.)

Creating a Filter for Your Media

The filter for your media type must mimic the syntax of the Genesys-provided filter for open media, `Media_X`. If you need to report on more than one type of media, create a separate filter for each media type.

To create a filter for your particular media:

1. In Configuration Manager, open the properties of your Stat Server `Application` object.
2. On the `Options` tab, locate the `Filters` section.
3. Open the section, and locate the `Media_X` filter. The option value that is specified for this filter is `PairExist("MediaType", "x")`.
4. In the `Filters` section, create a new filter with the name and value reflecting your media type.

   For example, for the Media EMail, set the name to `Media_email` and set the value to `PairExist("MediaType","email")`.
5. Repeat Step 4 for every media type on which you need to report.
6. Click `OK`.

Creating a Resource Template for Your Media

To create a resource (agent-related) template for a particular media type:

1. Locate the CCPulse+ storage file (the default name is `Templates.stg`) and change permissions for this file to at least `Write`.
2. Restart CCPulse+, if it is running.
3. Log in to CCPulse+ by using an account with the `Administrator` rank for the `Application` objects of the `Call Center Pulse` type. (Otherwise, the `Template Wizard` button is not active.)
4. In CCPulse+, start the Template Wizard. This Wizard contains three screens:
   - `Template Definition`
   - `Pre-defined Statistics`
   - `Graph`

5. On the Template Definition page:
   a. In the Available Object Types frame, select Agent, Agent Place, Group of Agents, and Group of Places.
   b. In the Available Templates frame, select Media X Resource Template.
   c. In the Options frame, select Create from selected template.
   d. Click Next.
6. On the Pre-defined Statistics page:
   a. In the Template Name box, type a unique name, keeping it under 25 characters. For example, for the Media EMail, name the template EMail Resource Template.
   b. In the Requested Statistics frame, select the Media X Resource group and click Rename under the Requested Statistics frame. Change the group name appropriately; for example, EMail Resource.
   c. For each non-formula–based statistic in the Requested Statistics frame, click Properties under the Requested Statistics frame. This opens the Statistic dialog box.
   d. In the Filter field in the Statistic dialog box, select the filter for a particular media that you created for this statistic in "Creating a Filter for Your Media" on page 119. In the Media EMail example, the filter is Media_email.
   e. Click OK.
7. On the Graph page, configure how graphs are to appear in the CCPulse+ views that you create based on this template, and then click Finish.
8. At the message prompt, click OK.

Creating an Agent-Based Report

To create a report for any agent-related object, for a particular media type:

1. In the Call Center Objects frame in the main CCPulse+ window, select the object on which you need to report. This can be an agent, a group of agents, a place, or a group of places.
2. Right-click the selected object, and select Create Real-Time View in the context menu.
3. In the Real-Time Data Template dialog box that appears, select the agent-related template for your particular media that you created in "Creating a Resource Template for Your Media" on page 119.
4. Click OK.

Creating an Open Media Report on an Interaction Queue

To create an open media report on an Interaction Queue, you must perform these major steps:

1. Create stat types for a particular media type, similar to Genesys-provided Media X stat types. (See "Creating Stat Types for Your Media" for detailed instructions.)
2. Create a new template that is based on the `Media X Queue Template`. (See "Creating an Interaction Queue Template" for detailed instructions.)
3. Create a CCPulse+ real-time view that is based on the template that you created for the particular media. (See "Creating an Interaction Queue Report" for detailed instructions.)

Creating Stat Types for Your Media

Before creating a template for an Interaction Queue, based on the `Media X Queue Template`, modify the following stat types or create duplicates for your particular media:

- `MediaX_Current_In_Processing_In_Queue`
- `MediaX_Maximum_Interactions_In_Queue`
- `MediaX_Minimum_Interactions_In_Queue`
- `MediaX_Stopped_Processing_In_Queue`
- `MediaX_Total_Entered_Queue`
- `MediaX_Total_Moved_From_Queue`

If you need to report on more than one type of media, create a separate set of stat types for each media type.

To modify a Media X stat type in Configuration Manager:

1. On the `Options` tab of your Stat Server `Application` object, select a section that is named after a particular stat type—for example, `MediaX_Current_In_Processing_In_Queue`.
2. Click the `Edit Section/Option` icon and change the stat type name so that it reflects your media name. To continue with the Media EMail example, change `MediaX_Current_In_Processing_In_Queue` to `Media_email_Current_In_Processing_In_Queue`.

   Note: If you prefer to keep Media X stat types for future reference, create a set of six new stat types for your media instead of modifying the Genesys-provided stat types.
3. Open the stat type configuration section by double-clicking the stat type name.
4. Change the value of the `MediaType` parameter to your media name. For example, change `x` to `email`.

5. Click Apply.
6. Repeat Steps 1 through 5 for all remaining Media X stat types.
7. Click OK.

Creating an Interaction Queue Template

To create an Interaction Queue template for a particular media type:

1. Check that the permissions for the CCPulse+ storage file (the default name is Templates.stg) are set to at least Write.
2. Restart CCPulse+, if it is running.
3. Log in to CCPulse+ by using an account with the Administrator rank for the Application objects of the Call Center Pulse type. (Otherwise, the Template Wizard button is not active.)
4. In CCPulse+, start the Template Wizard. This Wizard contains three screens:
   - Template Definition
   - Pre-defined Statistics
   - Graph
5. On the Template Definition page:
   a. Select Interaction Queue in the Available Object Types frame.

      Note: Interaction Queue is CCPulse+'s alias for the StagingArea object type.

   b. In the Available Templates frame, select Media X Queue Template.
   c. In the Options frame, select Create from selected template.
   d. Click Next.
6. On the Pre-defined Statistics page:
   a. In the Template Name box, type a unique name, keeping it under 25 characters. For example, name the template EMail Queue Template.
   b. In the Requested Statistics frame, select Media X Queue group and click Rename under the Requested Statistics frame. Change the group name appropriately; for example, EMail Queue.
   c. For each statistic in the Requested Statistics frame, click Properties under the Requested Statistics frame. This opens the Statistic dialog box.
   d. In the Statistical type field in the Statistic dialog box, select the stat type for a particular media that you created for this statistic in "Creating Stat Types for Your Media" on page 121.
   e. Click OK.

7. On the Graph page, configure how graphs are to appear in the CCPulse+ views that you created based on this template, and then click Finish.
8. At the message prompt, click OK.

Creating an Interaction Queue Report

To create a report for an Interaction Queue, for a particular media type:

1. In the Call Center Objects frame in the main CCPulse+ window, under Scripts, select the Interaction Queue object on which you need to report.
2. Right-click the Interaction Queue object and select Create Real-Time View in the context menu.
3. In the Real-Time Data Template dialog box that appears, select the Interaction Queue template for your particular media that you created in "Creating an Interaction Queue Template" on page 122.
4. Click OK.

Appendix

Managing Statistical Parameters

The statistical parameters that you can customize include filters, stat types, time ranges, and time profiles. Each can be defined in a near-infinite number of ways. Refer to Chapter 4, "Creating Custom Stat Types," on page 33, and Chapter 6, "Creating Custom Filters," on page 45, for customization examples. Other parameters that contribute to the definition of a statistic—such as actions, statistical categories, subjects, object statuses, and local or source timestamps—are not customizable *per se,* but they are variable. Predefined values are available for you to select from, for each to affect how Stat Server will calculate a statistic. These choices are documented in the *Framework 8.0 Stat Server User's Guide.*

The statistical parameters that you customize can service both CCPulse+ and CC Analyzer. With the exception of time profiles, these parameters are all defined within the Data Collection Services. (You can define new time profiles either within the Data Collection Services when you are customizing layout templates or within the Data Mart Services when you are customizing report layouts.)

You can use the Genesys Configuration Manager or Data Modeling Assistant (DMA) to create statistical parameters; however, there are some limitations with regard to editing and deleting them that will affect the choice of tool that you should use. In the following sections, this chapter describes how Reporting handles statistical parameters that are defined by either tool:

- Deciding Which Tool to Use, page 126
- Managing Statistical Parameters for Historical Reporting, page 127
- Managing Statistical Parameters for Real-Time Reporting, page 129
- Synchronizing Parameters, page 129

Deciding Which Tool to Use

Depending on whether statistical values are sourced from a Stat Server Java Extension or directly from Stat Server itself—and depending on which task you want to perform, related to statistical parameter management—there are advantages to using DMA over Configuration Manager, and vice versa. In one special scenario, neither tool can be used; parameter management must occur within the ODS database. Table 1 summarizes which application you should use to accomplish the task.

Table 1: Managing Statistical Parameters

Task to Be Performed		Use ...		
		Config Manager	DMA	ODS
Core Stat Param	Create a stat parameter	✓	✓	
	Edit an unused stat parameter	✓	✓	
	Edit a used stat parameter		✓	
	Delete a stat parameter		✓	
Java Stat Param[a]	Create a stat type	✓		
	Edit a stat type[b]	✓		✓
	Delete a stat type	✓		✓

a. Java statistical parameters are sourced from a Stat Server Java Extension and are applicable only to stat-type statistical parameters.

b. Editing a Java-based stat type is simulated by deleting the stat type and then recreating it with the same name.

The next section provides more details about why it is preferable to manage statistical parameters by using one tool over another.

Managing Statistical Parameters for Historical Reporting

Creating New Core Parameters

When formulating requests for statistical data from Stat Server, Data Sourcer references the statistical parameter definitions that are stored in its ODS database. Each time that Data Sourcer starts, however, it scans Configuration Server for new statistical parameters that were created using Configuration Manager within the corresponding Stat Server application. Data Sourcer writes their definitions to ODS. If Data Sourcer is already running when new statistical parameters are defined to Configuration Server, there is a period of time before Data Sourcer becomes aware of these new definitions.

When you create statistical parameters using DMA, DMA immediately writes their definitions to both Configuration Server and ODS.

For immediate availability, therefore, Genesys recommends that you use the constructor dialog boxes within DMA to create statistical parameters—with one exception. For stat type statistical parameters that are based on Stat Server Java Extensions, you *must* use Configuration Server. Java-related attributes are not accessible in DMA.

Creating New Java Parameters

Of the four parameter types, a Stat Server Java Extension (SSJE) affects only the stat-type statistical parameter. No filter, time-range, or time-profile definitions are supplied or supported by any Genesys -provided SSJE. The definition of a SSJE stat type (or Java stat type) includes both the special `Category` attribute—`JavaCategory`—and the `JavaSubCategory` attribute that points to a function inside a Java archive. The `E-mail Queue` CCPulse+ template, for example, includes the `Waiting Processing` statistic that is built on the `General_Email_Waiting_Processing` Java stat type:

```
[General_Email_Waiting_Processing]
Category=JavaCategory
JavaSubCategory=eServiceInteractionStat.jar:GEHR Current Waiting Processing
...
```

Because these two stat type attributes are not accessible via the `StatType Constructor` dialog box in DMA, you can only use Configuration Manager to create Java stat types.

Editing Existing Core Parameters

When you edit a statistical parameter using DMA, DMA writes the changed definition to both ODS and Configuration Server. Data Sourcer then uses this updated definition when it requests relevant statistics from Stat Server.

When you edit a statistical parameter using Configuration Manager, however, and if that parameter is being used in a currently opened request for the statistic, Data Sourcer stores the altered definition to ODS, but it does not update its request for the statistic with the new definition—and for good reason. This behavior is designed to maintain control within DMA/Data Sourcer as the single source of change for Historical Reporting parameters and to maintain the integrity of the data that has already been collected with data that is to be collected in the future.

After Data Sourcer initially reads configuration data and requests a certain statistic to be opened by Stat Server, Data Sourcer *never* picks up the definitions of statistical parameters that are currently used in calculations and that you have changed within Configuration Server—even if you invoke DMA's Synchronize feature, which is described on page 129.

In the scenario in which you edit a statistical parameter that is included in an unopened statistic, Data Sourcer picks up the updated parameter definition and uses it when it sends an open-statistic request to Stat Server. When you change a statistical parameter before the statistic has been opened, you do not have to restart Data Sourcer.

Editing Existing Java Parameters

Because Data Sourcer *never* picks up the definitions of Java stat types that are currently used in calculations, editing a Java stat type after the statistic has been opened (for Historical Reporting purposes) can be simulated only by deleting the stat type and then recreating it by using the altered definition.

Furthermore, in this scenario, you must stop and restart Data Sourcer so that it re-reads configuration data and sends new requests to Stat Server for a statistic that includes the edited parameter. If, however, the statistic has not been opened, Data Sourcer will pick up the stat type definition that you edit in Configuration Server, and you do not need to restart Data Sourcer.

Deleting Core Parameters

Deleting a statistical parameter within DMA is possible only if the parameter is not used in any report layout or layout template. When you delete a statistical parameter using DMA, DMA immediately removes that parameter from both Configuration Server and ODS.

When you delete a parameter using Configuration Manager, however, the parameter remains in the ODS, but Data Sourcer is unable to use any relevant statistics that rely on the parameter. Furthermore, upon using DMA's

synchronization feature, DMA rewrites the parameter and its definition to Configuration Server, by using the definition that is stored in ODS. For this reason, Genesys recommends that you use DMA to delete parameters that are used for Historical Reporting—if you must delete them at all.

Deleting Java Parameters

For unwanted Stat Server Java Extension stat types, you must both delete them from Configuration Server by using Configuration Manager and manually remove them from ODS. Contact Genesys Technical Support for assistance with the latter task.

Managing Statistical Parameters for Real-Time Reporting

For real-time metrics, CCPulse+ references definitions that are stored in the corresponding Stat Server application within Configuration Server. You cannot create, edit, or delete statistical parameters by using CCPulse+. You must use Configuration Server.

Synchronizing Parameters

DMA's Synchronize feature is a slight misnomer—this "synchronization" occurs unidirectionally. When you issue this command, Data Sourcer overwrites the statistical parameter definitions in Configuration Server with those stored in ODS. You cannot use this feature to overwrite ODS parameter definitions with those that are stored in Configuration Server.

Furthermore, DMA does not enable you to specify which parameter definitions it will overwrite; it overwrites all of them. Because of the lack of this parameter-by-parameter confirmation, Genesys recommends that you carefully analyze whether to perform synchronization at all.

Because Data Sourcer reads new parameters, and not changed parameters, from Configuration Server, keep the following in mind if you need to edit the definition of an extension stat type that you created in Configuration Server after Data Sourcer has already read its definition:

- Data Sourcer will not recognize any change that you make to the stat type within Configuration Server.
- You cannot edit this stat type definition within DMA (because the MediaType and Java-related attributes are not accessible in DMA).
- If you perform a synchronization, Data Sourcer overwrites Configuration Server's definition of the stat type with ODS's definition.

If you needed to edit an extension stat type after Data Sourcer has read its definition, you would have to delete the stat type definition both from Configuration Server and manually within ODS. Contact Genesys Technical Support for assistance, should this event occur.

Related Documentation Resources

The following resources provide additional information that is relevant to this software. Consult these additional resources as necessary.

Reporting

- The *Reporting 8.0 Deployment Guide,* which provides step-by-step instructions for configuring and installing the Reporting components.
- The *Reporting 8.0 Reference Manual,* which provides general information about performance measurements, how Reporting behaves during time shifts, and how to set up custom reports for skills-based and partial-period reporting.
- The *Reporting 8.0 CCPulse+ Help,* which contains detailed instructions for using CCPulse+ features and functions.
- The *Reporting 8.0 CCPulse+ Administrator's Guide,* which presents information on customizing and troubleshooting your CCPulse+ application. It also includes tables showing which historical statistics link with which real-time statistics for all statistics included in the solution templates.
- The *Reporting 7.6 Data Sourcer User's Guide,* which describes the role Data Sourcer plays in your Reporting environment and includes the Configuration Server objects Data Sourcer tracks, how it organizes data, and how to fine-tune configuration and troubleshoot problems.
- The *Reporting 7.6 Data Modeling Assistant Help,* which explains how to import and export templates, create new statistical parameters, and create new layout templates and report layouts.
- The *Reporting 7.6 ETL Assistant Help,* which describes how ETL Assistant manages metadata in the Data Mart and allows you to view information about the results of data transformation and aggregation from different sources.

- The *Reporting 7.6 ETL Runtime User's Guide,* which describes the role that ETL Runtime plays in your Reporting environment. It includes a discussion of ETL Runtime's modules, the runtime parameters, options you can set to fine-tune configuration, and how to schedule ETL Runtime processes.
- The *Report Generation Assistant* book of the *Reporting Technical Reference* series, which explains how to use the Report Generation Assistant to build sample charts, pivots, and reports that you can further tailor using Hyperion Interactive Reporting Studio for your final report output.

T-Server

- The *Genesys 7 Events and Models Reference Manual* and *T-Library SDK 7.2 C Developer's Guide* (its predecessor) which provides detailed information on T-Server features and functions.

Framework

- The *Framework 8.0 Stat Server User's Guide,* which describes Stat Server architecture and functions, configuration steps and options, installation procedures, and statistical definitions and formulas.

Genesys

- The *Genesys Technical Publications Glossary,* which ships on the Genesys Documentation Library DVD and which provides a comprehensive list of the Genesys and computer-telephony integration (CTI) terminology and acronyms used in this document.
- The *Genesys Migration Guide*, which ships on the Genesys Documentation Library DVD, and which provides documented migration strategies for Genesys product releases. Contact Genesys Technical Support for more information.
- The Release Notes and Product Advisories for this product, which are available on the Genesys Technical Support website at `http://genesyslab.com/support`.

Information about supported hardware and third-party software is available on the Genesys Technical Support website in the following documents:

- *Genesys Supported Operating Environment Reference Manual*
- *Genesys Supported Media Interfaces Reference Manual*

Consult these additional resources as necessary:

- The *Genesys Hardware Sizing Guide,* which provides information about Genesys hardware sizing guidelines for the Genesys 8.x releases.

- The *Genesys Interoperability Guide,* which provides information on the compatibility of Genesys products with various Configuration Layer Environments; Interoperability of Reporting Templates and Solutions; and Gplus Adapters Interoperability.
- The *Genesys Database Sizing Estimator 7.6 Worksheets,* which provides a range of expected database sizes for various Genesys products.

For additional system-wide planning tools and information, see the release-specific listings of System Level Documents on the Genesys Technical Support website, accessible from the system level documents by release tab in the Knowledge Base Browse Documents Section.

Genesys product documentation is available on the:

- Genesys Technical Support website at http://genesyslab.com/support.
- Genesys Documentation Library DVD, which you can order by e-mail from Genesys Order Management at orderman@genesyslab.com.

Document Conventions

This document uses certain stylistic and typographical conventions—introduced here—that serve as shorthands for particular kinds of information.

Document Version Number

A version number appears at the bottom of the inside front cover of this document. Version numbers change as new information is added to this document. Here is a sample version number:

80rtr-customization_10-2010_v8.0.001.00

You will need this number when you are talking with Genesys Technical Support about this product.

Screen Captures Used in This Document

Screen captures from the product graphical user interface (GUI), as used in this document, may sometimes contain minor spelling, capitalization, or grammatical errors. The text accompanying and explaining the screen captures corrects such errors *except* when such a correction would prevent you from installing, configuring, or successfully using the product. For example, if the name of an option contains a usage error, the name would be presented exactly as it appears in the product GUI; the error would not be corrected in any accompanying text.

Type Styles

Table 2 describes and illustrates the type conventions that are used in this document.

Table 2: Type Styles

Type Style	Used For	Examples
Italic	• Document titles • Emphasis • Definitions of (or first references to) unfamiliar terms • Mathematical variables Also used to indicate placeholder text within code samples or commands, in the special case where angle brackets are a required part of the syntax (see the note about angle brackets on page 135).	Please consult the *Genesys Migration Guide* for more information. Do *not* use this value for this option. A *customary and usual* practice is one that is widely accepted and used within a particular industry or profession. The formula, $x + 1 = 7$ where x stands for . . .

Table 2: Type Styles (Continued)

Type Style	Used For	Examples
Monospace font (Looks like `teletype` or `typewriter text`)	All programming identifiers and GUI elements. This convention includes: • The *names* of directories, files, folders, configuration objects, paths, scripts, dialog boxes, options, fields, text and list boxes, operational modes, all buttons (including radio buttons), check boxes, commands, tabs, CTI events, and error messages. • The values of options. • Logical arguments and command syntax. • Code samples. Also used for any text that users must manually enter during a configuration or installation procedure, or on a command line.	Select the `Show variables on screen` check box. In the `Operand` text box, enter your formula. Click `OK` to exit the `Properties` dialog box. T-Server distributes the error messages in `EventError` events. If you select `true` for the `inbound-bsns-calls` option, all established inbound calls on a local agent are considered business calls. Enter `exit` on the command line.
Square brackets ([ ])	A particular parameter or value that is optional within a logical argument, a command, or some programming syntax. That is, the presence of the parameter or value is not required to resolve the argument, command, or block of code. The user decides whether to include this optional information.	`smcp_server -host [/flags]`
Angle brackets (< >)	A placeholder for a value that the user must specify. This might be a DN or a port number specific to your enterprise. **Note:** In some cases, angle brackets are required characters in code syntax (for example, in XML schemas). In these cases, italic text is used for placeholder values.	`smcp_server -host <confighost>`

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